

NRC
CLOSED PREDECISIONAL ENFORCEMENT CONFERENCE
ST. LUCIE NUCLEAR PLANT

DECEMBER 10, 1996

EEF/ 80

[2] OPENING
REMARKS

OPENING REMARKS AND INTRODUCTIONS
(S. Ebnetter)

Good morning. I am Stew Ebnetter, Regional Administrator for the Nuclear Regulatory Commission's Region II Office. This morning we will conduct a predecisional enforcement conference between the NRC and St. Lucie which is CLOSED to public observation.

The agenda for the predecisional enforcement conference is shown in the viewgraph. Following my brief opening remarks, Mr. Bruno Uryc, the Director of the Region II Enforcement Staff, will discuss the Agency's Enforcement Policy. I will then provide introductory remarks concerning my perspective on the events to be addressed today. Mr. Albert Gibson, Director of the Division of Reactor Safety, will then discuss the apparent violations. You will then be given an opportunity to respond to the apparent violations. In this regard, I wish to reiterate to you that the decision to hold this conference does not mean that the NRC has determined that a violation has occurred or that enforcement action will be taken. This conference is an important step in arriving at that decision.

Following each presentation, I plan to take about a 10-minute break so that the NRC can briefly review what it has heard and determine if we have follow-up questions. Lastly, I will provide concluding remarks.

At this point, I would like to have the NRC staff introduce themselves and then ask you to introduce your participants.

[INTRODUCTIONS]

Thank you.

Mr. Uryc will now discuss the Agency's Enforcement Policy.

NRC ENFORCEMENT POLICY

I will provide some background information on the enforcement process for those who might not be familiar with the process. The NRC Enforcement Program is governed by the Commission's Enforcement Policy, (NUREG 1600). For those who desire, we have copies of the Enforcement Policy available on the table behind me.

Following an inspection, the inspector's findings are reviewed and if a determination is made that the findings constitute an apparent violation, the apparent violation is initially categorized into one of four severity levels based on safety and regulatory significance. For cases where there is a potential for escalated enforcement action, that is, where the severity level of the apparent violation may be at a severity level I, II, or III, a predecisional enforcement conference is normally held. Copies of the inspection report for the issues to be discussed today are also provided on the table.

A predecisional enforcement conference is essentially the last step of the inspection process before the staff makes an enforcement decision. The purpose of a predecisional enforcement conference is not to negotiate a sanction. Our purpose here today is to obtain information that will assist us in determining the appropriate enforcement action, such as: (1) a common understanding of the facts, root causes and missed opportunities associated with the violations, (2) a common understanding of corrective action taken or planned, and (3) a common understanding of the significance of issues and the need for lasting comprehensive action.

At the predecisional enforcement conference stage of the process, we want to be sure the licensee understands the significance of the issues and is taking effective corrective action. We are seeking information that may be relevant to either mitigation or escalation of any resulting sanction, as well as determining the licensee's position on the findings in the inspection report, which was provided in advance of the conference. We are interested in whether the licensee is challenging the factual findings in the report or the apparent violations and if so, the basis for any such disagreement. Licensees are encouraged to provide any information they believe is relevant to an enforcement decision.

The apparent violations discussed at the conference are subject to further review by the NRC. They are subject to change prior to any resulting enforcement action. It is important to note that the decision to conduct the conference does not mean that NRC has determined that a violation has occurred or that enforcement action will be taken. I should also note that statements

or opinions made by NRC staff at the conference, or silence in response to a licensee statement, should not be taken as an NRC position.

There are three primary enforcement sanctions available to the NRC and they are Notices of Violation, civil penalties, and orders. Notices of Violation and civil penalties are issued based on identified violations. Orders may be issued for violations, or, in the absence of a violation, because of a significant public health or safety issue.

Following this conference, the Regional Administrator in coordination with the NRC Office of Enforcement and other Headquarter's offices will reach an enforcement decision. This process normally takes four weeks to accomplish.

Finally, if the final enforcement action involves a proposed civil penalty or an order, the NRC will issue a press release 24 hours after the enforcement action is issued.

SUMMARY OF THE ISSUES

(S. Ebnetter)

This enforcement conference is to address apparent violations in three functional areas, i.e., security, emergency response organization and engineering. Each of the apparent violations represents an issue with which we have significant regulatory concern. For the security issues, your Access Control Program has resulted in a failure to prevent unauthorized individuals from gaining access into the St. Lucie facility. Upon discovery of the deficiencies, you failed to report the unauthorized access into the protected area within one hour and log related events. As a consequence, one unauthorized individual entered the protected area, and had the potential to enter the vital areas, and five other unauthorized individuals could have had access to both the protected and/or vital areas. It appears that human resources and plant supervisors failure to follow procedures and notify security when personnel were terminated largely contributed to the above deficiencies.

With regard to your emergency preparedness organization, we are concerned that the issues under consideration represent a breakdown in management control of the emergency preparedness program for the St. Lucie Plant. We are further concerned that you missed opportunities to take corrective actions for many of the findings from this inspection as these issues were identified to you by members of your staff during the past two years.

Regarding the engineering issue, you installed a modification to the nuclear instrumentation system that was not thoroughly reviewed by an independent party. As a result, the modification resulted in cross-wiring of the system.

Lack of independent review of modifications could lead to a loss of design basis configuration. Further, you did not properly conduct an independent verification of a new computer code used for core monitoring. Again, independent verification is essential in assuring that the plant is configured consistent with your license.

At this point I will turn over the discussions to Al Gibson who will discuss each of these issues in detail. We will proceed with the security issue first, complete it and then move on to the emergency preparedness issue and the engineering issue.

STATEMENT OF CONCERNS / APPARENT VIOLATIONS
(A. Gibson)

This is a predecisional enforcement conference to discuss three apparent violations. The first issue is associated with the failure of your Access Control Program to prevent unauthorized individuals gaining access into the St. Lucie facility. As a result of that failure, one unauthorized individual did gain access to the protected area, and also had potential to enter vital areas. Additionally, five other unauthorized individuals could have gained access to both protected and vital areas. The apparent violations were identified during an inspection performed between October 21 and 25, 1996.

In addition to the violations, we are concerned that corrective action for a St. Lucie Condition Report, issued on August 19, 1996, which identified access control problems, did not identify the extent of the problem and prevent further deficiencies from occurring. We are also concerned that your failure to report the event in one hour is a repeat of a previous reportability violation, which was identified in Inspection Report 96-16.

Our inspection findings are documented in Inspection Report 96-19 which was transmitted to you on November 15, 1996. At this conference we are affording you the opportunity to provide information relative to:

- Any errors in the inspection report
- The severity of the violations
- Any escalation or mitigation considerations
- Any other application of the Enforcement Policy relevant to this issue.

APPARENT VIOLATIONS

PREDECISIONAL

VIOLATION A

10 CFR 73.55(7) requires that licensee's shall establish an access authorization system to limit unescorted access to vital areas during non-emergency conditions to individuals who require access in order to perform their duties.

The licensee's Physical Security Plan (PSP), Revision 48, dated 2/23/96 states, "Only those individuals with identified need for access and having appropriate authorization, shall be granted unescorted Vital Area access."

From July 28, 1996 to September 19, 1996 an individual whose employment terminated on July 28, 1996, had unescorted access to protected and vital areas without appropriate authorization. In addition, on August 7; August 9; and August 15, 1996, that individual entered the protected area and had access to vital areas.

Also, five other individuals had unescorted access to the protected and vital areas after they were terminated from the period of July 27 to September 19, 1996, without appropriate authorization. However, those individuals did not access the protected or vital areas.

NOTE: The apparent violations discussed in this enforcement conference are subject to further review and are subject to change prior to any resulting enforcement decision.

APPARENT VIOLATIONS

PREDECISIONAL

VIOLATION B

10 CFR 73. Appendix G. states that an actual entry of an unauthorized person into a protected area or vital area be reported within one hour of discovery.

10 CFR 73. Appendix G. states that any failure, degradation, or discovered vulnerability in a safeguards system that could have allowed unauthorized or undetected access to a protected area or a vital area had compensatory measures not been established, be recorded within 24 hours of discovery in the safeguards event log.

On October 9, 1996, the licensee discovered that an individual had been terminated on July 28, 1996, and had entered the protected area on five different occasions, yet failed to make a report within the one hour timeframe. In addition, on September 19, 1996, the licensee discovered three individuals who had previously been terminated on July 27, July 28, and August 24, 1996 that had access to the protected area and failed to report that discovery in the safeguards event log.

NOTE: The apparent violation discussed in this enforcement conference are subject to further review and are subject to change prior to any resulting enforcement decision.

STATEMENT OF CONCERNS / APPARENT VIOLATIONS
(A. Gibson)

The second predecisional enforcement conference concerns three apparent violations and a related apparent deviation in the area of emergency preparedness. The three apparent violations involve (1) failure to adequately maintain the capability for timely augmentation of your Emergency Response Organization during off-hours, (2) failure to establish and maintain adequate procedures for the implementation of certain requirements contained in the Radiological Emergency Plan, and (3) failure to adequately implement multiple aspects of your training program for Emergency Response Organization personnel. The apparent deviation involves the failure to relocate the requirements formerly found in TS 6.8.1.d and 6.8.1.e to the Security Plan or Emergency Plan, as applicable, in accordance with a written commitment to the NRC.

Our inspection findings are documented in Inspection Report 96-18, which was transmitted to you on November 26, 1996. At this conference we are affording you the opportunity to provide information relative to:

- Any errors in the inspection report
- The severity of the violations
- Any escalation or mitigation considerations
- Any other application of the Enforcement Policy relevant to this issue.

APPARENT VIOLATION A

PREDECISIONAL

10 CFR 50.54(q) requires that nuclear power plant licensees follow and maintain in effect emergency plans which meet the planning standards of 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50. Section 2.4 of the licensee's Radiological Emergency Plan (REP), Revision 31, states that activation of the Technical Support Center (TSC) and the Operational Support Center (OSC) will be initiated by the Emergency Coordinator in the event of an Alert, Site Area Emergency, or General Emergency, and that arrangements have been made to staff the TSC and OSC in a timely manner. Also specified is that activation of the Emergency Operations Facility (EOF) is required for a Site Area Emergency or General Emergency, and that arrangements have been made to activate the EOF in a timely manner.

The REP requirements delineated above are implemented in part by Emergency Plan Implementing Procedure (EPIP) 3100023E, "On-Site Emergency Organization and Call Directory", Revision 72. The instruction in Section 8.2 of that procedure states that, upon the declaration of an emergency classification, "the Duty Call Supervisor will initiate staff augmentation" using the "Emergency Recall System or Appendix A, Duty Call Supervisor Call Directory to notify persons..."

From approximately July 22 to October 3, 1996, arrangements were not available to staff or activate the TSC, OSC, or EOF in a timely manner because the licensee did not have the capability to adequately implement either the primary method (using the Emergency Recall System) or the backup method (using the Duty Call Supervisor Call Directory) for notifying its personnel during off-hours to staff and activate the TSC, OSC, and EOF.

NOTE: The apparent violations discussed in this enforcement conference are subject to further review and are subject to change prior to any resulting enforcement decision.

APPARENT VIOLATION B

PREDECISIONAL

As of August 19, 1996, Technical Specification (TS) 6.8.1.e required that written procedures be established, implemented, and maintained covering Emergency Plan implementation. (The subject TS was deleted with NRC approval effective August 20, 1996, but these examples of inadequate EIPs existed in the same form prior to August 20, 1996 as when identified during the inspection.)

Procedures covering Emergency Plan implementation were not adequately established, implemented, and maintained with respect to the following aspects of the Emergency Plan:

- a. recovery activities, as discussed conceptually in REP Section 5.4
- b. description and delineation of the licensee's emergency response organization (ERO) and the detailed means for notifying ERO members in an emergency, as discussed generally in REP Section 2.2
- c. relocation of the OSC if required by radiological or other adverse conditions during an emergency, as referenced in REP Section 2.4.4

NOTE: The apparent violations discussed in this enforcement conference are subject to further review and are subject to change prior to any resulting enforcement decision.

APPARENT VIOLATION C

PREDECISIONAL

10 CFR 50.54(q) requires that nuclear power plant licensees follow and maintain in effect emergency plans which meet the planning standards of 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50.

REP Section 7.2.1. "Objectives", stated the following: "The primary objectives of emergency response training are as follows: 1. Familiarize appropriate individuals with Emergency Plan and related implementing procedures. 2. Instruct individuals in their specific duties to ensure effective and expeditious action during an emergency. 3. Periodically present significant changes in the scope or content of the Emergency Plan. 4. Provide refresher training to ensure that personnel are familiar with their duties and responsibilities." REP Section 7.2.2. "Training of On-Site Emergency Response Organization [ERO] Personnel", states, "The training program for members of the on-site emergency response organization will include practical drills as appropriate and participation in exercises, in which each individual demonstrates an ability to perform assigned emergency functions... For employees with specific assignments or authorities as members of emergency teams, initial training and annual retraining programs will be provided. Training must be current to be maintained on the site Emergency Team Roster." REP Section 7.3.2 states, "The Plant Training Manager will ensure that on-site Emergency Response Organization personnel are informed of relevant changes in the Emergency Plan and Emergency Plan Implementing Procedures [EPIPs]."

- a. In 1994, the licensee failed to provide initial training or annual retraining for 17 positions (approximately 92 individuals) identified as part of the on-site response organization. In 1995, the licensee failed to provide initial training or annual retraining for 8 positions (approximately 54 individuals) identified as part of the on-site response organization.
- b. The licensee's training program failed to include initial training or annual retraining on all procedures required to be implemented by ERO personnel in several identified positions. Examples: EPIP 3100027E, "Re-entry" - Emergency Coordinator, Radiation Team Leader, OSC Supervisor, Re-entry Team Supervisor, Re-entry Team Member, OSC Status Board Keeper, and OSC Dose Recorder. EPIP 3100026E, "Criteria for and Conduct of Evacuation" - Emergency Coordinator, Assembly Area Supervisor, and TSC Security Supervisor. EPIP 3100035E, "Off-site Radiation Monitoring" - Radiation Team Leader and TSC Supervisor.

The Plant Training Manager failed to ensure that ERO personnel in several identified positions were informed of relevant changes in procedures. Example: EPIP 3100026E, "Criteria for and Conduct of Evacuations".

- c. For the calendar year 1995, the licensee failed to remove from the emergency response organization two individuals who had not completed retraining as required, and whose qualifications had expired in 1994. The licensee also failed to remove six individuals from the emergency team roster effective October 6, 1996, who had not remained qualified to fill response team requirements as a result of allowing their respirator qualifications to lapse.

APPARENT DEVIATION

PREDECISIONAL

Amendment Nos. 147 and 86 to the operating licenses for Units 1 and 2, respectively, were approved by the NRC on August 20, 1996, and consisted of changes to the TS in response to the licensee's application dated August 16, 1995. Among numerous changes in these amendments were the deletion (for both Units 1 and 2) of the previous TS 6.8.1.d and TS 6.8.1.e, which formerly specified that "Written procedures shall be established, implemented and maintained" to cover "Security Plan implementation" and "Emergency Plan implementation", respectively. In Attachment 2, "Safety Analysis", to the August 15, 1995 application, the licensee stated (in the introduction to the section addressing modifications to TS 6.5.1.6.i, 6.5.1.6.j, 6.8.1.d, and 6.8.1.e) that the "selected Technical Specifications are being relocated to the Emergency Plan or Security Plan as appropriate. Relocating these requirements to the appropriate plan will ensure the control of future changes are under the requirements of 10 CFR 50.54, 10 CFR 73.55 and 10 CFR 73.56." The NRC's referenced approval of the subject application stated that the "licensee proposes to relocate these review requirements and their implementing procedures to the St. Lucie Security and Emergency Plans..."

The licensee failed to relocate the requirements formerly found in TS 6.8.1.d and 6.8.1.e to the Security Plan or Emergency Plan, as applicable, in accordance with the commitment to the NRC contained in the licensee's application dated August 16, 1995.

NOTE: The apparent violations discussed in this enforcement conference are subject to further review and are subject to change prior to any resulting enforcement decision.

[7] CONCERNS
APPARENT VIOLATIONS

STATEMENT OF CONCERNS / APPARENT VIOLATIONS
(A. Gibson)

The third predecisional enforcement conference concerns apparent violations regarding installation of a modification to your nuclear instrumentation system. Upon reaching 100% power your staff identified conditions inconsistent with expected parameters. Further investigation revealed that the modification was incorrectly designed such that electrical drawers which process the nuclear instrumentation signals were cross-wired. We are concerned about the failure of your design control process and about the potential impact of this failure implies on other design products. We are also concerned that the miswiring and calibration errors were not identified earlier based upon questions raised by control room operators. With regard to the third violation, we are concerned that a Condition Report was not written when the marking discrepancy was discovered and about the potential impact on quality if Condition Reports have not been written as required for other discrepant conditions.

Our inspection findings are documented in Inspection Report 96-22 which was transmitted to you on November 26, 1996. At this conference we are affording you the opportunity to provide information relative to:

- Any errors in the inspection report
- The severity of the violations
- Any escalation or mitigation considerations
- Any other application of the Enforcement Policy relevant to this issue.

APPARENT VIOLATIONS

PREDECISIONAL

VIOLATION A

10 CFR 50, Appendix B, Criterion III, Design Control, requires, in part, that measures be established to ensure that the design basis is correctly translated into drawings and that design control measures provide for verifying the adequacy of the design by individuals other than those who performed the original design.

FPL Topical Quality Assurance Report, TQR 3.0, Revision 11, "Design Control," Section 3.2.4, "Design Verification," stated, in part, "Design control measures shall be established to independently verify design input... Design verification shall be performed by technically qualified individuals or groups other than those who performed the design."

Engineering Quality Instructions (QI) 1.7, Design Input/Verification, dated July 5, 1995, states, in part, that "Design verification is the process whereby a competent individual, who has remained independent of the design process, reviews the design inputs, ... and design output to verify design adequacy. This independent review is provided to minimize the likelihood of design errors in items that are important to nuclear safety."

- 1) On July 30, 1996, it was discovered that a design change (PC/M 009-195) to install new nuclear instrumentation system drawers did not receive an independent design verification by a competent individual independent of the design process. Design change PC/M 009-195 was completed by a lead designer and a lead engineer. This design change was independently verified by a second designer who had no special knowledge of the design. The design was then approved by the lead engineer whom was not independent of the design process.
- 2) On July 30, 1996, it was discovered that an independent design review was not conducted for the installation of a new core flux monitoring computer code BEACON. During initial operation of BEACON it was found that the code did not compensate for a core mid-plane offset created by a previous core modification. The engineer who prepared the design was not aware of the core mid-plane offset and the lack of an independent review of the new BEACON code did not provide the opportunity to identify this omission.

NOTE: The apparent violations discussed in this enforcement conference are subject to further review and are subject to change prior to any resulting enforcement decision.

VIOLATION B

PREDECISIONAL

Technical Specification 6.8, Procedures and Programs, paragraph 6.8.1 requires, in part, that written procedures recommended in Appendix A of Regulatory Guide 1.33 revision 2, February 1978, shall be established and implemented.

Engineering Quality Instruction (QI) 3.7, Computer Software Control, Revision 1, Section 5.4, requires that SQAI software shall be validated and verified (V&V'ed) in accordance with Section 5.6 of QI 3.7. Section 5.6 states that new software shall be V&V'ed prior to use. The V&V process includes the use of test cases to ensure the new software produces correct results. Item 4 of Section 5.6 states that technical adequacy shall be determined by comparing the test case to results from alternative methods such as functionally equivalent and previously validated software.

During the Unit 1 Cycle 14 outage, BEACON core monitoring system was placed into service on Unit 1 without any benchmarking against IMPAX, the on-line core performance monitoring code BEACON was replacing. Instead, BEACON was installed on Unit 2 and benchmarked against CECORE, the core monitoring system installed on Unit 2, which did not require any modifications to accommodate the core midplane offset.

NOTE: The apparent violations discussed in this enforcement conference are subject to further review and are subject to change prior to any resulting enforcement decision.

VIOLATION C

PREDECISIONAL

Technical Specification 6.8, Procedures and Programs, paragraph 6.8.1, requires in part that written procedures recommended in Appendix A of Regulatory Guide 1.33 revision 2, February 1978, shall be established and implemented.

Administrative Procedure No. 0006130, Condition Reports, Revision 4, dated March 22, 1996, Par. 8.1.1.A states in part that "Any individual who becomes aware of a problem or discrepant condition ... should initiate a CR. If doubt exists, a CR form should be initiated".

On July 30, 1996, Instrument and Control technicians installing Modification PC/M 009-195 did not initiate a Condition Report when they became aware of a discrepant condition when markings for electrical terminal connectors differed from existing cable markings. The failure to resolve the discrepant condition resulted in incorrectly installing two excore nuclear instrumentation system detectors.

NOTE: The apparent violations discussed in this enforcement conference are subject to further review and are subject to change prior to any resulting enforcement decision.

ENFORCEMENT ACTION
WORKSHEET

INFORMATION REQUIRED TO BE AVAILABLE FOR ENFORCEMENT PANEL

ST. LUCIE UNAUTHORIZED ACCESS

PREPARED BY: Lori Stratton

DATE: 10/30/96

NOTE: The Section Chief of the responsible Division is responsible for preparation of this questionnaire and its distribution to attendees prior to an Enforcement Panel. The Section Chief shall also be responsible for providing the meeting location and telephone bridge number to attendees via e-mail [ENF.GRP, CFE, OEMAIL, JXL, JRG, SHL, LFD; appropriate RII DRP, DRS; appropriate NRR, NMSS]. A Notice of Violation (without "boilerplate") which includes the recommended severity level for the violation is required. Copies of applicable Technical Specifications or license conditions cited in the Notice or other reference material needed to evaluate the proposed enforcement action are required to be enclosed.

This Notice has been reviewed by the Branch Chief or Division Director and each violation includes the appropriate level of specificity as to how and when the requirement was violated.

Signature

1. Facility: St. Lucie
Unit(s): 1 and 2
Docket Nos: 50-335, 50-389
License Nos: DPR-67, NPF-16
Inspection Report No: 96-19
Inspection Dates: 10/21 - 10/25/98
Lead Inspector: L. Stratton

1. Brief Summary of Inspection Findings:

- A. 10 CFR 73.55(7) requires that licensee's shall establish an access authorization system to limit unescorted access to vital areas during non-emergency conditions to individuals who require access in order to perform their duties.

The licensee's Physical Security Plan (PSP), Revision 48, dated 2/23/96 states, "Only those individuals with identified need for access and having appropriate authorization, shall be granted unescorted Vital Area access."

Contrary to the above, from July 28, 1996 to September 19, 1996 an individual whose employment terminated on July 28, 1996, had unescorted access to protected and vital areas without appropriate authorization. In addition, on August 7; August 9; and August 15, 1996, that individual entered the protected area and had access to vital areas.

ENFORCEMENT ACTION
WORKSHEET

- 2 -

Also, ^{five} three other individuals had unescorted access to the protected and vital areas after they were terminated from the period of July 27 to September 19, 1996, without appropriate authorization. However, those individuals did not access the protected or vital areas.

- B. 10 CFR 73, Appendix G, states that an actual entry of an unauthorized person into a protected area or vital area be reported within one hour of discovery.

10 CFR 73, Appendix G, states that any failure, degradation, or discovered vulnerability in a safeguards system that could have allowed unauthorized or undetected access to a protected area or a vital area had compensatory measures not been established, be recorded within 24 hours of discovery in the safeguards event log.

Contrary to the above, on October 9, 1996, the licensee discovered that an individual had been terminated on July 28, 1996, and had entered the protected area on five different occasions, yet failed to make a report within the one hour timeframe. In addition, on September 19, 1996, the licensee discovered three individuals who had previously been terminated on July 27, July 28, and August 24, 1996 that had access to the protected area and failed to report that discovery in the safeguards event log.

2. Analysis of Root Cause:

Violation A:

Responsible organizations failure to adhere to Administrative Procedure (AP) 0010509, "Personnel and Material Control," Revision 18, dated 9/30/96 and notify security when individuals were terminated. Also, those organizations' inadequate review of the 31 day vital area access lists.

Violation B:

Security's failure to implement Security Procedure (SP) 0006125, "Report of Safeguards Events," Revision 10, dated 10/9/96.

3. Basis for Severity Level (Safety Significance): [Include example from the supplements, aggregation, repetitiveness, willfulness, etc.]

Violation A: Supplement III, SL III

The NRC Enforcement Policy states as example, "A failure or inability to control access through established systems or procedures, such that an unauthorized individual (i.e., not authorized unescorted access to the protected area) could easily gain undetected access into a vital area from outside the protected area."

ENFORCEMENT ACTION
WORKSHEET

- 3 -

Violation B: Supplement III, SL III

The NRC Enforcement Policy states in Section 7.10, "The severity level assigned to the licensee's failure to submit a required, acceptable, and timely report on a violation that occurred at the licensee's facility is normally the same as would be assigned to the violation that should have been reported. However, the severity level for submitting a late report may be reduced, depending on the individual circumstances.

NOTE This is a first repeat of this violation with respect to failure to make a one hour report.

4. Identify Previous Escalated Action Within 2 Years or 2 Inspections?
[by EA#, Supplement, and Identification date.]

- 95-180: PORVs Inoperable Due To Personnel Error, SL III
- 96-040: Dilution Event: SL III
- 96-249: Multiple Examples of Inadequate 50.59 Reviews: SL III

5. Identification Credit? [Enter Yes or No]: No

Consider following and discuss if applicable below:

- ☐ Licensee-identified ☐ Revealed through event ☐ NRC-identified
☐ Mixed identification ☐ Missed opportunities

Violation A:

Security immediately removed the individuals' access when discovered. However, The licensee missed an opportunity to evaluate their access program on 8/19/96, when Condition Report (CR) 96-2041 was issued. This CR identified that an individual was presented a FPL severance package and his access was still valid 12 days later. In addition, although Security did remove the individuals' access authorization, they missed an opportunity to validate that those individuals did not use their unauthorized access from the date of their respective terminations.

Violation B:

Several missed opportunities with respect to reportability occurred at St. Lucie. (a) The security access coordinator on September 19 failed to notify any other personnel when he discovered three individuals had unauthorized access. Therefore, the event was not logged in the safeguards event log. (b) When the security access coordinator learned on October 9 that one of the individuals he had earlier identified as having unauthorized access actually entered the protected area, he did not notify his supervisor. However, the event was neither one hour reported nor logged in the safeguard event log. (c) When the Security Manager learned of the event of October 11, a determination was made to put the event in the safeguards event log rather than make a one hour report. The event was eventually reported on October 16.

ENFORCEMENT ACTION
WORKSHEET

- 4 -

A possibility exists that if the individual did not apply for a position at Turkey Point and had his processing for that position conducted by the St. Lucie staff for convenience purposes, the problem would not have been identified. (See attached chronology for more specific details).

Enter date Licensee was aware of issues requiring corrective action:

Violations A and B: September 19, 1996

6. Corrective Action Credit? [Enter Yes or No]: No.

Brief summary of corrective actions:

Violation A:

- Security immediately removed the individuals' unescorted access to the protected and vital areas.
- FP&L inter-office correspondence dated October 25 to all responsible organizations that by COB 10/30/96, an access review and certification that all individuals listed on the attached access lists are valid.
- A comparison of a listing of 594 terminated individuals to the security computer to verify that unescorted access was correct, which was started October 17 and completed October 31. Out of those 594, three more individuals were identified. Two individuals were identified for Turkey Point and one individual was identified with unauthorized access to both facilities.
- However, an inadequate assessment of CR 96-2041 which resulted in no specific corrective action could have identified to the licensee a problem existed as early as 8/19/96. Also, again on 9/19/96, when the access coordinator discovered the three individuals who had unauthorized access. Finally on October 9 when the licensee discovered an individual had entered the protected area after termination, the licensee once again should have identified a problem existed with respect to terminations and unescorted access. Not until the period of October 16, when the event was called to the NRC to October 25, when CR 96-2496 was generated, did the licensee recognize a significant problem existed.

Violation B:

- The licensee did eventually determine a one hour report was warranted.
- No other corrective action had been initiated. The corrective action generated by the violation cited in IR 96-16 was partially complete when the events occurred and fully completed prior to the

ENFORCEMENT ACTION
WORKSHEET

- 5 -

finish of the inspection. However, the corrective action for IR 96-16 was to change the procedure to include tampering events, whereas the cause of these violations was adherence to the procedure itself.

7. Candidate For Discretion? [See attached list] [Enter Yes or No]:

Indeterminate.

- The licensee's failure to report the event within one hour is a repeat violation.

8. Is A Predecisional Enforcement Conference Necessary?
[Enter Yes or No]: Yes.

Why: To facilitate a better understanding of root cause and missed opportunities.

If yes, should OE or OGC attend? [Enter Yes or No]: Yes
Should conference be closed? [Enter Yes or No]: No

9. Non-Routine Issues/Additional Information:

See attached chronology.

10. This Action is Consistent With the Following Action (or Enforcement Guidance) Previously Issued: [EICS to provide] [If inconsistent, include:]

Basis for Inconsistency With Previously Issued Actions (Guidance)

11. Regulatory Message: Encouragement of prompt identification and prompt comprehensive corrective action.

12. Recommended Enforcement Action:

Severity Level III and Severity Level IV violation.

13. This Case Meets the Criteria for a Delegated Case. [EICS - Enter Yes or No]

No

14. Should This Action Be Sent to OE For Full Review? [EICS - Enter Yes or No]

No

If yes why:

ENFORCEMENT ACTION
WORKSHEET

- 6 -

15. Regional Counsel Review [EICS] At the panel.
No Legal Objection Dated:

16. Exempt from Timeliness: [EICS] No.
Basis for Exemption:

Enforcement Coordinator:
DATE:

ISSUES TO CONSIDER FOR DISCRETION

- ☐ Problems categorized at Severity Level I or II.
- ☐ Case involves overexposure or release of radiological material in excess of NRC requirements.
- ☐ Case involves particularly poor licensee performance.
- ☐ Case (may) involve willfulness. Information should be included to address whether or not the region has had discussions with OI regarding the case, whether or not the matter has been formally referred to OI, and whether or not OI intends to initiate an investigation. A description, as applicable, of the facts and circumstances that address the aspects of negligence, careless disregard, willfulness, and/or management involvement should also be included.
- ☐ Current violation is directly repetitive of an earlier violation.
- ☐ Excessive duration of a problem resulted in a substantial increase in risk.
- ☐ Licensee made a conscious decision to be in noncompliance in order to obtain an economic benefit.
- ☐ Cases involves the loss of a source. (Note whether the licensee self-identified and reported the loss to the NRC.)
- ☐ Licensee's sustained performance has been particularly good.
- ☐ Discretion should be exercised by escalating or mitigating to ensure that the proposed civil penalty reflects the NRC's concern regarding the violation at issue and that it conveys the appropriate message to the licensee. Explain.

CHRONOLOGY

UNAUTHORIZED INDIVIDUAL ENTERING THE PA AFTER TERMINATION

- 7/28/96 Employee terminated.
- 9/19/96 PSL Access Coordinator identifies employee terminated and removes the individual's access (along with 2 others), but fails to notify Security.
- 10/7/96 TPN contacts PSL Access Coordinator to process this individual for TPN access.
- 10/9/96 During the processing of this individual, the PSL Access Coordinator notices that the employee's last badge use date is after his termination date. Further review reveals the individual had entered the PA on 5 occasions (3 different days). Upon interview of the individual, the licensee learns he returned for an interview on one occasion. However, on the other occasions, came back to talk to other people in general. The Access Coordinator notifies the security supervisor, who determines the event as non-reportable.
- 10/11/96 The Security Manager learns of the situation and logs the event in the licensee's SEL. CR is generated.
- 10/16/96 The licensee determines the event to be one hour reportable. Call made to Region II (Stratton) and OPS Center.

PROBLEMS:

1. Procedure does not provide a form/checklist for termination.
2. Procedure denotes responsibility to the individual, their supervisor, and human resources to notify security upon termination. All three individuals failed to do so.
3. No training on the procedure. Limited distribution of the procedure, however, the procedure is available to anyone.
3. Access Coordinator's failure to notify security and recognize the seriousness of the situation and failure to log the event in the licensee's SEL.
4. Security's failure to one hour report the event after learning the individual had entered the protected area. IR 96-16 (tampering event report) also identified a violation for failure to report.
5. The licensee's missed an opportunity to investigate/correct the problem when, on 8/19/96, CR 96-2041 identified an individual having access to the site 12 days after termination. The corrective action did not

identify the extent of the access control problem.

6. If the individual had not processed in at PSL, the problem may not have been identified, and the licensee would still not know an unauthorized individual had entered the PA.
7. Corporate QA had responsibility to ensure compliance with this procedure. No evidence that was ever initiated.
8. This problem is FPL wide. PTN also has identified individuals who had access after they were terminated. No other individuals who had access after termination entered either site. Responsible organizations who failed to notify Security included Engineering, MIS, Human Resources, I&C, and QA.
9. Numerous severance packages are being offered in conjunction with many terminations at FPL.
10. Security's inadequate investigation of the event in that, the two people identified by the individual as being visited on the days when the individual accessed the site were interviewed. That's all that was done as far as Security's investigation. Upon independent inspection, this inspector learned that the two individuals spent approximately 2 hours with the individual, 1.5 hours on 8/15 and 15 minutes on 8/7. According to access records, the employee was in the protected area as follows:

8/7/96	12:02 - 12:45	(43 minutes)
8/7/96	12:59 - 14:26	(30 minutes)
8/7/96	14:37 - 17:15	(2 hours 38 minutes)
8/9/96	10:07 - 13:37	(3 hours 30 minutes)
8/15/96	12:47 - 17:37	(4 hours 50 minutes)

Approximately 10 hours inside the protected area are unaccounted for.

11. Individual had PA and VA access. Did not enter any VAs during the times noted above.

ENFORCEMENT ACTION WORKSHEET

INADEQUATE DESIGN CONTROL

PREPARED BY: John W. York

DATE: October 28, 1996

NOTE: The Section Chief of the responsible Division is responsible for preparation of this EAW and its distribution to attendees prior to an Enforcement Panel. The Section Chief shall also be responsible for providing the meeting location and telephone bridge number to attendees via e-mail [ENF.GRP, CFE, OEMAIL, JXL, JRG, SHL, LFD; appropriate RII DRP, DRS; appropriate NRR, NMSS]. A Notice of Violation (without "boilerplate") which includes the recommended severity level for the violation is required. Copies of applicable Technical Specifications or license conditions cited in the Notice or other reference material needed to evaluate the proposed enforcement action are required to be enclosed.

This Notice has been reviewed by the Branch Chief or Division Director and each violation includes the appropriate level of specificity as to how and when the requirement was violated.

Signature

Facility: St. Lucie

Unit(s): 1 and 2

Docket Nos: 50-335, 389

License Nos: DPR-67, NPF-16

Inspection Report No: 96-17

Inspection Dates: 10/7-11, and 10/15-18, 1996

Lead Inspector: John York

1. **Brief Summary of Inspection Findings:** [Always include a short statement of the regulatory concern/violation. Reference and attach draft NOV. Then, either summarize the inspection findings in this section or reference and attach sections of the inspection report. Inspectors are encouraged to utilize the Noncompliance Information Checklist provided in Enclosure 4 to ensure that the information gathered to support the violation is complete.]

The licensee replaced some safety related nuclear instrumentation drawers during the Unit 1 Outage. The drawers were wired backwards because of incorrect drawings. Part of the root cause identified the lack of a proper independent verification as a potential cause. This is a violation of 10 CFR 50 Appendix B Criterion III. In examining the safety aspects of this event, one additional example of inadequate design verification was identified for BEACON on line core performance monitoring system.

In addition to the wiring problem for the drawers, the maintenance group connected the field cables for an NI backwards because the pins on the connectors were different than on the previous detectors. An NOV was written for failure to write a Condition Report (discrepancy report) and resolve this problem prior to installation of the detector.

See attached IR feeder and proposed NOV for details.

**PROPOSED ENFORCEMENT ACTION - NOT FOR PUBLIC DISCLOSURE
WITHOUT THE APPROVAL OF THE DIRECTOR, OE**

2. Analysis of Root Cause:

Lack of control and procedural adherence in the licensee's program for preparing and implementing Plant Change/Modifications (PC/Ms).

3. Basis for Severity Level (Safety Significance): [Include example from the supplements, aggregation, repetitiveness, willfulness, etc.]

Aggregation of examples and application of Supplement I. C.7. a breakdown in the control of licensed activities involving two violations that are related that collectively represent a potentially significant lack of attention toward licensed activities.

The safety significance of reversing the detector inputs to the NIS drawers substantially reduced the safety margin between the TM/LP trip setpoint and the analysis limit even considering the increased TM/LP margin to the trip setpoint due to actual core operating conditions.

4. Identify Previous Escalated Action Within 2 Years or 2 Inspections? [by EA#, Supplement, and Identification date.]

EA 96-249 - Inadequate 50.59 did not identify USQ, 7/12/96

EA 96-040 - Boron Overdilution Event, Supplement 1, 1/22/96

EA 95-180 - Inoperable PORVs due to Inadequate PMT, Supplement 1, 8/4/95

5. Identification Credit? No

The miswired NI drawers were identified through an event (the failure to have the system respond properly), i. e. the analysis of the data by Reactor Engineering discovered the miswiring of the NI drawers but the error in the drawing should have been discovered in the design control process.

The design error associated with BEACON was identified through routine comparisons of actual plant data with predicted data. This error could have been discovered in the design control process.

Enter date Licensee was aware of issues requiring corrective action:
7/30/96

6. Corrective Action Credit? Yes

Brief summary of corrective actions:

In response to the issue, the licensee adopted corrective actions which included:

- For immediate action the licensee prepared a change request for the modification package and channels A,C, and D were reconnected and testing was performed to verify proper NI response.
- A root cause/self assessment and training meeting for the Engineering Department emphasizing importance of proper design

verification and importance of questioning attitude. Tape was produced of this meeting for future engineering training.

- Procedures (Engineering Quality Instructions) were revised to (1) require all critical aspects be verified during the PC/M, (2) emphasize that the same level of verification is required for PC/Ms duplicated for the second unit, and (3) reinforce the verification requirements for safety related drawings.
- Walkdowns will be conducted (linear NIs) to revise any design documentation and tagging.
- ASI targets will be established for future trending of ASI during power ascension.
- Require cross-disciplinary reviews of design inputs
- Better documentation of assumptions in core design inputs and codes

Explain application of corrective action credit:

Corrective action appears to be of appropriate scope.

7. Candidate For Discretion? NO

Explain basis for discretion consideration:

Since actual power conditions did not exceed trip setpoints, no escalation is warranted. Several examples of licensee's declining performance in engineering does not warrant mitigation.

8. Is A Predecisional Enforcement Conference Necessary? Yes

Why:

To determine adequacy of licensee's proposed long-term corrective actions regarding backward looks at modifications performed prior to the Unit 1 outage. This included discussions of other modifications that may not have been independently verified.

If yes, should OE or OGC attend? [Enter Yes or No]:
Should conference be closed? [Enter Yes or No]:

9. Non-Routine Issues/Additional Information:

ENFORCEMENT ACTION
WORKSHEET

- 4 -

10. This Action is Consistent With the Following Action (or Enforcement Guidance) Previously Issued: [EICS to provide] [If inconsistent, include:]

Basis for Inconsistency With Previously Issued Actions (Guidance)

11. Regulatory Message:

Positive control must be established and maintained over the design process, with particular emphasis on properly performing independent design verification.

12. Recommended Enforcement Action:

SL III

13. This Case Meets the Criteria for a Delegated Case. [EICS - Enter Yes or No]

14. Should This Action Be Sent to OE For Full Review? [EICS - Enter Yes or No]

If yes why:

15. Regional Counsel Review [EICS to obtain]
No Legal Objection Dated:

16. Exempt from Timeliness: [EICS]
Basis for Exemption:

Enforcement Coordinator:
DATE:

ENFORCEMENT ACTION WORKSHEET - ISSUES TO CONSIDER FOR DISCRETION

- ☐ Problems categorized at Severity Level I or II.
- ☐ Case involves overexposure or release of radiological material in excess of NRC requirements.
- ☐ Case involves particularly poor licensee performance.
- ☐ Case (may) involve willfulness. Information should be included to address whether or not the region has had discussions with OI regarding the case, whether or not the matter has been formally referred to OI, and whether or not OI intends to initiate an investigation. A description, as applicable, of the facts and circumstances that address the aspects of negligence, careless disregard, willfulness, and/or management involvement should also be included.
- ☐ Current violation is directly repetitive of an earlier violation.
- ☐ Excessive duration of a problem resulted in a substantial increase in risk.
- ☐ Licensee made a conscious decision to be in noncompliance in order to obtain an economic benefit.
- ☐ Cases involves the loss of a source. (Note whether the licensee self-identified and reported the loss to the NRC.)
- ☐ Licensee's sustained performance has been particularly good.
- ☐ Discretion should be exercised by escalating or mitigating to ensure that the proposed civil penalty reflects the NRC's concern regarding the violation at issue and that it conveys the appropriate message to the licensee. Explain.

Enclosure 3

REFERENCE DOCUMENT CHECKLIST

- ☐ NRC Inspection Report or other documentation of the case:
NRC Inspection Report Nos.:
- ☐ Licensee reports:
- ☐ Applicable Tech Specs along with bases:
- ☐ Applicable license conditions
- ☐ Applicable licensee procedures or extracts
- ☐ Copy of discrepant licensee documentation referred to in citations such as NRC, inspection record, or test results
- ☐ Extracts of pertinent FSAR or Updated FSAR sections for citations involving 10 CFR 50.59 or systems operability
- ☐ Referenced ORDERS or Confirmation of Action Letters
- ☐ Current SALP report summary and applicable report sections
- ☐ Other miscellaneous documents (List):

NI INSPECTION ST. LUCIE-October 7-18, 1996

On July 30, 1996, St. Lucie Unit 1 was operating at approximately 100 % power when reactor engineering was analyzing the data taken during power ascension and noted an anomaly in the results. The data indicated three of the four excore linear detectors measured core power moving to the top of the core during power ascension. This was an unexpected phenomena and did not agree with the trend of the power moving to the bottom of the core indicated by RPS Channel B Linear Range Detector, Control Channel #9 Linear Range Detector, and the BEACON Core Power Distribution Monitoring System. Evaluation of the data collected indicated that RPS Channels A,C, and D could have reversed (rolled) leads of the top and bottom chambers input to the RPS drawers.

The modification performed during the outage associated with this problem was No. PC/M 009-195. During the outage, the licensee replaced the power range NI drawers for the Reactor Protection System (RPS) with new Gamma Metrics drawers. This modification combined the linear power range input to the RPS and the logarithmic wide range channel into a single drawer, i.e. reduced the number of drawers on Unit 1 from eight to four. This modification increased the limits of the instruments range and replaced aging equipment.

Engineering Verification-Root Cause

A design error was responsible for the reverse connection (rolled leads) on four NI safety related drawers on Unit 1. The Controlled Wiring Diagram (CWD), no. JPN-009-195-001/002 depicted the upper Uncompensated Ion Chamber (UIC) connected to the lower UIC input at the NI drawer. The root cause noted that the designer and the lead engineer interpreted conflicting information, on the existing CWDs and made an assumption.

The independent verification may have caught this error had the process been properly performed. The drawings were prepared by the lead designer with input from the lead engineer. The drawings were then checked by a second designer who had no special knowledge of the NI design. This check was essentially a drafting check. The drawings were then reviewed by the lead designer and then by the engineering supervisor.

Engineering Quality Instructions (QI) 1.7, Design Input/Verification, dated July 5, 1995, states in part that "Design verification is the process whereby a competent individual, who has remained independent of the design process, reviews the design inputs, ... and design output to verify design adequacy. This independent review is provided to minimize the likelihood of design errors in items that are important to nuclear safety." Contrary to this requirement the first reviewer could not be considered as competent because he was not an engineer as required by

**PROPOSED ENFORCEMENT ACTION - NOT FOR PUBLIC DISCLOSURE
WITHOUT THE APPROVAL OF THE DIRECTOR, OE**

QI 1.7 and the lead engineer as the third reviewer could not be considered to have remained independent of this design project.

One of the action items to prevent recurrence was to check all the I&C and electrical PC/M to see if all the drawing approval signatures could qualify as independent verifiers. The licensee found three out of eight open modifications where this was a potential problem, two of these modifications were electrical and one was I&C. This therefore is not an isolated case. This failure to perform independent verification according to procedure is identified as example one of violation 50-335/96-17-XX, Failure to Control the Design Process According to the Requirements of 10 CFR 50, Appendix B, Criterion III.

BEACON Core Power Distribution Monitoring System

The licensee had installed BEACON during this refueling outage to replace the older IMPAX code used for in-core flux monitoring. BEACON provided several significant improvements over IMPAX one being real-time flux profile monitoring. This improvement permitted reactor engineering to identify the NIS problem quickly and initiate prompt corrective actions.

During power operations, reactor engineering used BEACON to obtain the actual in-core flux profile. The actual in-core flux profile was then used to verify compliance with Technical Specifications and provide calibration information for the excore NIS drawers. As part of these routine surveillances, reactor engineering compares actual in-core flux profile to the in-core flux profile predicted by the core design code. Reactor engineering noted larger than normal errors between actual and predicted in-core flux profile. Because BEACON used the same neutronics engine as used in the core design code, reactor engineering could not explain the error and notified the corporate core design engineers. As part of the process to resolve these errors, it was discovered that a simplifying assumption, used to overcome limitations of the IMPAX, was not accounted for in the original design of BEACON. This simplifying assumption was used because the licensee had changed the fuel design to incorporate a longer end cap to prevent debris induced fuel failures. This longer end cap raised the overall core height by 2.64" causing an offset between detector midplane and actual core midplane. The IMPAX code assumed detector midplane was along core midplane and could not accommodate the 2.64" offset. Therefore, the licensee, after discussion with the fuel vendor (Siemens), used this simplifying assumption to essentially lower the core midplane by 2.64" so that final design output would be referenced to detector midplane; not core midplane. However, the engineer preparing the design input for BEACON was not aware of this simplifying assumption consequently BEACON was referenced to core midplane resulting in an increased error between the core design predicted in-core flux profile and actual in-core flux profile.

**PROPOSED ENFORCEMENT ACTION - NOT FOR PUBLIC DISCLOSURE
WITHOUT THE APPROVAL OF THE DIRECTOR, OE**

The licensee's root cause evaluation identified lack of cross-discipline review as the significant contributor to this design error. The inspector concurred with the licensee's evaluation. Engineering Quality Instructions (QI) 1.7, Design Input/Verification, dated July 5, 1995, states in part that "Design verification is the process whereby a competent individual, who has remained independent of the design process, reviews the design inputs, ... and design output to verify design adequacy. This independent review is provided to minimize the likelihood of design errors in items that are important to nuclear safety." Contrary to this requirement, the design inputs were not adequately reviewed by a competent individual in that the core midplane offset was not identified as a design input for BEACON. This failure to perform an adequate independent design review for the BEACON system is identified as example two of violation 50-335/96-17-XX, Failure to Control the Design Process According to the Requirements of 10 CFR 50, Appendix B, Criterion III.

The safety significance of reversing the detector inputs to the NIS drawers substantially reduced the safety margin between the TM/LP trip setpoint and the analysis limit even considering the increased TM/LP margin to the trip setpoint due to actual core operating conditions. The safety impact of the failure to identify the core and detector midplane offset on TM/LP or LPD safety limits was minimal.

CONNECTOR SWAPS AT DETECTOR 6-CHANNEL B

All four of the RPS Linear Range Detectors had the connectors reversed as previously discussed but the B channel unlike the other three channels was giving the correct data. At the same time that the drawers were being replaced on Unit 1, the detector for channel B (detector no. 6) was being replaced as a maintenance activity. During connection of the field cables, the connections were reversed for the upper and lower detection chambers, thereby causing the B channel to record properly.

The root cause for the swap of the cables was that the new detector had different labeling than the existing cables. The existing cables were labeled TOP SIG and BOT SIG, and the new detector had A and B. The inspectors discussed this maintenance job with the I&C supervision who had supervised the latter part of this maintenance project. Several opportunities were presented to the maintenance personnel, one when the detectors were checked out in the warehouse and a second time when this condition was noted in the field.

Maintenance personnel should have resolved the labeling problem by writing a Condition Report (CR) and having a formal resolution. Administrative Procedure No. 0006130, Condition Reports, rev. 4, dated March 22, 1996, Par. 8.1.1.A states in part that "Any individual who becomes aware of a problem or discrepant condition ... should initiate a

**PROPOSED ENFORCEMENT ACTION - NOT FOR PUBLIC DISCLOSURE
WITHOUT THE APPROVAL OF THE DIRECTOR, OE**

CR. If doubt exists, a CR form should be initiated". This failure to comply with the requirements of the administrative procedure is identified as violation 50-335/96-17-YY. Failure to Initiate a Condition Report for Labeling on Safety Related Detectors.

**PROPOSED ENFORCEMENT ACTION - NOT FOR PUBLIC DISCLOSURE
WITHOUT THE APPROVAL OF THE DIRECTOR, OE**

Violation 1 with two examples.

10 CFR 50 Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants." Criterion III requires, in part, that ... design control measures shall provide for verifying or checking the adequacy of design, such as the performance of design reviews...The verifying or checking process shall be performed by individuals or groups other than those who performed the original design, but who may be from the same organization.

FPL Topical Quality Assurance Report, TQR 3.0, revision 11, "Design Control," Section 3.2.4, "Design Verification," stated, in part, "Design control measures shall be established to independently verify design input...Design verification shall be performed by technically qualified individuals or groups other than those who performed the design.

Engineering Quality Instructions 1.7 "Design Input/Verification," rev.1, dated July 5, 1995, states in part, "Design verification is the process whereby a competent individual, who has remained independent of the design process, reviews the design inputs, ... and design output to verify design adequacy.

Contrary to the above:

1. Contrary to the above, on July 30, 1996, it was discovered that a design change (PC/M 009-195) was completed without an independent design verification by a competent individual. Design change PC/M 009-195 to install new Gamma Metrics Nuclear Instrumentation drawers was completed by a lead designer and a lead engineer. This design change was independently verified by a second designer who had no special knowledge of the design. A engineering supervisor approved the design. Neither the second designer or engineering supervisor had remained independent of the design process.
2. Contrary to the above, on July 30, 1996, it was discovered that an independent design review was not conducted for the installation of a new core flux monitoring computer code BEACON. During initial operation of BEACON it was found that the code did not compensate for a core mid-plane offset created by a previous core modification. The engineer who prepared the design was not aware of the core mid-plane offset and the independent review of the new BEACON code did not identify this omission.

Violation 2

Technical Specification 6.8, Procedures and Programs, paragraph 6.8.1 requires in part that written procedures recommended in Appendix A of Regulatory Guide 1.33 revision 2, February 1978, shall be established, implemented...

**PROPOSED ENFORCEMENT ACTION - NOT FOR PUBLIC DISCLOSURE
WITHOUT THE APPROVAL OF THE DIRECTOR, OE**

Administrative Procedure No. 0006130, Condition Reports, revision 4, dated March 22, 1996, Paragraph 8.1.1.A states in part that "Any individual who becomes aware of a problem or discrepant condition ... should initiate a CR. If doubt exists, a CR form should be initiated".

Contrary to the above, on July 30, 1996, Instrument and Control technicians installing a plant design change (PC/M 009-15) did not initiate a condition report when they became aware of a discrepant condition concerning incorrectly marked cables. They continued to install the modification and an error was made that resulted in cross-wiring of the nuclear instrumentation system.


ENFORCEMENT ACTION WORKSHEET

BREAKDOWN IN MANAGEMENT CONTROL OF THE ST. LUCIE EMERGENCY PREPAREDNESS PROGRAM

PREPARED BY: James L. Kreh

DATE: November 7, 1996

This Notice has been reviewed by the Branch Chief or Division Director and each violation includes the appropriate level of specificity as to how and when the requirement was violated.



Signature

Facility: St. Lucie Plant
Units: 1 & 2
Docket Nos.: 50-335, 50-389
License Nos.: DPR-67, NPF-16
Inspection Report No.: 96-18
Inspection Dates: October 7-18 and October 28-November 1, 1996
Lead Inspector: J. L. Kreh

1. Brief Summary of Inspection Findings:

Violation A

On the evening of October 3, 1996, the licensee conducted a test of its automated system known as the FPL Emergency Recall System (informally called "autodialer") for notifying the emergency response organization (ERO) in the event of an off-hour emergency requiring augmentation of the on-shift crew for staffing and activation of emergency response facilities (viz., Technical Support Center [TSC], Operational Support Center [OSC], and Emergency Operations Facility [EOF]). The autodialer did not operate, and no individuals received notifications during the test. A failure assessment by the licensee disclosed that the autodialer had been in an inoperable configuration for a period which apparently began on July 22, 1996. In addition, the inspection identified the licensee's failure to adequately maintain the manual backup system (a "call tree") for ERO call-out over an indeterminate period (at least the last several years). These concurrent deficiencies represent a failure (during the period July 22-October 3, 1996 at minimum) to maintain the capability to execute the provisions of the REP and its implementing procedures in a timely manner with respect to mobilization of the ERO during off-hours.

ENFORCEMENT ACTION
WORKSHEET

- 2 -

Violation B

The licensee's training program for ERO personnel has not been adequately implemented since at least 1994. This violation includes failure to provide opportunities for most personnel to participate in exercises and/or drills, failure to provide annual retraining to certain designated personnel in 1994 and 1995, failure to provide any training for certain ERO positions with respect to selected implementing procedures, and failure to remove individuals from the ERO roster when their respirator qualifications had lapsed.

2. Analysis of Root Cause:

The root cause of both violations is failure of licensee management to (a) provide an appropriate level of oversight of the emergency preparedness program as required by the REP, and (b) ensure the implementation of timely and effective corrective actions for identified findings and deficiencies in emergency preparedness.

3. Basis for Severity Level (Safety Significance):

For both violations: Supplement VIII - Emergency Preparedness, SL III

Section C.3 of Supplement VIII presents as an example, "Violations involving ... a breakdown in the control of licensed activities involving a number of violations that are related ... that collectively represent a potentially significant lack of attention or carelessness toward licensed responsibilities."

Section IV.A of the Enforcement Policy states that "a group of Severity Level IV violations may be evaluated in the aggregate and assigned a single, increased severity level, thereby resulting in a Severity Level III problem, if the violations have the same underlying cause or programmatic deficiencies, or the violations contributed to or were unavoidable consequences of the underlying problem."

4. Identify All Previous Escalated Actions Within 2 Years or 2 Inspections

- ▶ 95-180: PORVs Inoperable Due To Personnel Error: SL III
- ▶ 96-040: Dilution Event: SL III
- ▶ 96-249: Multiple Examples of Inadequate 50.59 Reviews: SL III

5. Identification Credit? Yes

Violation A

Date licensee was aware of issues requiring corrective action:
October 3, 1996. This identification credit/date applies only to the autodialer inoperability portion of the violation. The problem with the manual call-out system was NRC/CI-identified.

ENFORCEMENT ACTION
WORKSHEET

- 3 -

Explain application of identified credit, who and how identified and consideration of missed opportunities:

The inoperability of the autodialer was identified by the licensee on 10/3/96, but could have been identified much earlier if periodic functional tests (e.g., weekly) had been performed. With appropriate administrative controls in place (as had been recommended by an EP Coordinator as early as April 1996), autodialer inoperability would have almost certainly have been precluded. An autodialer problem (limited in scope--not a complete system failure) also occurred during the NRC-evaluated June 1993 exercise, but corrective action for that problem was clearly not sufficiently comprehensive.

Violation B

Date when the licensee was aware of issues requiring corrective action: January 1996.

Explain application of identification credit, who and how identified and consideration of missed opportunities:

Many of the identified failures in the licensees training program were self-identified in a self-assessment that was performed in January 1996. However, some of the identified failures were not self-identified, but should have been through existing licensee program controls.

6. Corrective Action Credit? No

Violation A

Administrative controls have been implemented for the autodialer under Protective Services Department Guideline No. PSG-015, "Maintenance and Testing of the Emergency Recall System", Revision 0, dated 10/29/96. For the manual call-out system, individuals required to maintain a copy of the procedure were added to the controlled distribution list, and a drill was conducted on October 10, 1996 with reasonably successful results.

Application of corrective action credit: (1) No credit for autodialer issue because identified by licensee EP Coordinator in early 1996 and no action taken; (2) Credit for correction of manual call-out problem after identification to licensee on 10/7/96.

Violation B

The licensee has initiated action items to evaluate and determine corrective actions for self-identified issues. The licensee is currently completing a mass training effort for all emergency response organization positions necessitated by recent changes in responsibilities from Corporate staff assignments to Plant staff assignments.

Application of corrective action credit: No credit because the licensee has not yet fully determined or implemented programmatic changes to resolve identified issues.

ENFORCEMENT ACTION
WORKSHEET

- 4 -

7. Candidate For Discretion? No

Licensee's performance in emergency preparedness is now recognized to have been particularly poor during the past several years.

8. Is A Predecisional Enforcement Conference Necessary? Yes

Why? To determine whether the subject violations represent a programmatic breakdown in emergency preparedness.

If yes, should OE or OGC attend? Yes

Should conference be closed? No

9. Non-Routine Issues/Additional Information:

OTHER FINDINGS FROM THE OCTOBER 1996 EP PROGRAM INSPECTION

Violation

Failure to establish an Emergency Plan Implementing Procedure (EPIP), or to have an adequate EPIP, with appropriate implementing details to address certain aspects of the Radiological Emergency Plan as follows:

- a. the transfer of OSC functions to an alternate location in the event that evacuation of the primary OSC is required (EPIP-3100032E, "On-site Support Centers", contains no implementing details for the statement in Radiological Emergency Plan Section 2.4.4 that "In the event that the OSC becomes untenable, the Emergency Coordinator will designate an alternate location.") {inadequate procedure}, and
- b. recovery activities upon reaching a stable plant condition following an emergency (Radiological Emergency Plan Section 5.4) {no procedure}.

Emergency Preparedness Program Weaknesses

1. Inadequate program of drills to ensure availability of sufficient ERO personnel and timeliness of ERF staffing
2. Management failure to ensure the implementation of timely corrective actions for certain emergency preparedness deficiencies and weaknesses. Examples are:
 - a. failure to address concerns regarding the audibility of the Gaitronics (or plant public-address system) formally identified in late 1994 and still being tracked as an open item by the licensee's corrective action system.
 - b. failure to provide adequate corrective action to address a questionable capability for notification of the State of Florida within 15 minutes of an emergency declaration (identified by an NRC inspection in February 1995), and

ENFORCEMENT ACTION
WORKSHEET

- 5 -

- c. failure to implement timely corrective actions for deficiencies and recommendations identified by the critique of the Hurricane Erin response in August 1995 (examples of issues: identify hurricane-safe structures onsite and a plan for positioning personnel in those structures; designate an onsite individual to monitor the hurricane path; establish consistent staffing policies)

- 10. This Action is Consistent With the Following Action (or Enforcement Guidance) Previously Issued:

Supplement VIII, Section C.3

ENFORCEMENT ACTION
WORKSHEET

- 6 -

11. Regulatory Message:

Management must provide strong and consistent oversight and support for emergency preparedness activities in order to ensure a viable emergency response capability at all times.

12. Recommended Enforcement Action:

Two SL IV violations evaluated in the aggregate as a SL III problem

13. Should This Action Be Sent to OE For Full Review? No

14. Exempt from Timeliness: No
Basis for Exemption: N/A

Enforcement Coordinator:
DATE:

DRAFT NOTICE OF VIOLATION

St. Lucie Plant
Inspection Report Nos. 50-335, 50-389/96-18

- A. 10 CFR 50.54(q) requires that nuclear power plant licensees follow and maintain in effect emergency plans which meet the planning standards of 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50.

Section 2.4 of the licensee's Radiological Emergency Plan (REP), Revision 31, states that activation of the Technical Support Center (TSC) and the Operational Support Center (OSC) will be initiated by the Emergency Coordinator in the event of an Alert, Site Area Emergency, or General Emergency, and that arrangements have been made to staff the TSC and OSC in a timely manner. Also specified is that activation of the Emergency Operations Facility (EOF) is required for a Site Area Emergency or General Emergency, and that arrangements have been made to activate the EOF in a timely manner.

The REP requirements delineated above are implemented by procedure EPIP-3100023E, "On-Site Emergency Organization and Call Directory", Revision 72. The instruction in Section 8.2 of that procedure states that, upon the declaration of an emergency classification, "the Duty Call Supervisor will initiate staff augmentation" using the "Emergency Recall System or Appendix A, Duty Call Supervisor Call Directory to notify persons..."

Contrary to the above, from approximately July 22 to October 3, 1996, arrangements were not available to staff or activate the TSC, OSC, or EOF in a timely manner because the licensee did not have the capability to implement either the primary method (using the Emergency Recall System) or the backup method (using the Duty Call Supervisor Call Directory) for notifying its personnel to report to the plant during off-hours to staff and activate the TSC, OSC, and EOF.

- B. 10 CFR 50.54(q) requires that nuclear power plant licensees follow and maintain in effect emergency plans which meet the planning standards of 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50.

REP Section 7.2.2, "Training of On-Site Emergency Response Organization Personnel", states, "The training program for members of the on-site emergency response organization will include practical drills as appropriate and participation in exercises, in which each individual demonstrates an ability to perform assigned emergency functions." The licensee's Plan further states, "For employees with specific assignments or authorities as members of emergency teams, initial training and annual retraining programs will be provided. Training must be current to be maintained on the site Emergency Team Roster."

Contrary to the above, the licensee failed to provide a program which included an opportunity for each individual assigned to the on-site emergency response organization to participate in a drill or exercise, as follows:

ENFORCEMENT ACTION
WORKSHEET

- 8 -

1. In 1994, the licensee failed to provide training for 17 positions (approximately 92 individuals) identified as part of the on-site response organization. In 1995, the licensee failed to provide training for 8 positions (approximately 54 individuals) identified as part of the on-site response organization.
2. The licensee's training program failed to include initial, periodic retraining, or information on revisions with respect to certain procedures required to be implemented by several identified positions. These procedures included EPIP 3100026E, Criteria for Conduct of Evacuation; EPIP 3100027E, Re-entry; and EPIP 3100035E, Offsite Radiological Monitoring.
3. For the calendar year 1995, the licensee failed to remove from the emergency response organization 4 individuals who had not completed retraining as required, and their training qualifications had expire in 1994. The licensee failed to remove 6 individuals from the emergency response organization effective October 6, 1996, who had not remained qualified to fill response team requirements as a result of allowing their respirator qualifications to lapse.



FPL

ST. LUCIE PLANT
RADIOLOGICAL EMERGENCY PLAN

REVISION 31

Approved by: _____

TH Linder

President, Nuclear Division

Date _____

9 / 13 / 96

970009025

8PP

2. ORGANIZATION, FACILITIES, AND SUPPORT SERVICES (continued)

2.4 2. Technical Support Center (TSC)

The company maintains an on-site Technical Support Center to provide the Control Room with in-depth diagnostic and engineering assistance without adding to congestion within the Control Room. The TSC interfaces with the EOF regarding those diagnostic and engineering decisions. This assistance can help determine the operational decisions that would be appropriate to best control and mitigate the consequences of the emergency. The TSC is located adjacent to the Unit 1 Control Room.

Activation of the Technical Support Center will be initiated by the Emergency Coordinator in the event of an Alert, Site Area Emergency or General Emergency. Arrangements have been made to staff the TSC in a timely manner.

The Technical Support Center contains pertinent records and drawings.

The Technical Support Center has an emergency communications network similar to the Control Rooms. The TSC also has the NRC FTS Emergency Telecommunications System. See section 4.6 for a more detailed description of the FTS system.

3. Operational Support Center (OSC)

The company maintains an on-site Operational Support Center (OSC) to serve as an assembly point for auxiliary operators, health physics technicians, maintenance personnel, and other plant personnel available to support the emergency response. Required staff will be assigned to appropriate activities by the Emergency Coordinator or his/her designee.

Equipment that can be used by personnel dispatched from the OSC is stored in the Service Building. Table 2-4 indicates the types of material and equipment stored there.

Activation of the OSC will be initiated by the Emergency Coordinator. The OSC will be activated and in operation for an Alert, Site Area Emergency or General Emergency. Arrangements have been made to staff the OSC in a timely manner.

The OSC is maintained in the second floor large conference room in the North Service Building. Telephone communications are maintained between the OSC and the Technical Support Center.

2. ORGANIZATION, FACILITIES, AND SUPPORT SERVICES (continued)

2.4 4. Alternate Operational Support Center

In the event that the OSC becomes untenable, the Emergency Coordinator will designate an alternate location.

5. Emergency Operations Facility (EOF)

The company maintains an Emergency Operations Facility from which evaluation and coordination of FPL activities related to an emergency can be carried out and from which FPL can provide information to federal, state, and local authorities.

The Emergency Operations Facility is located at the intersection of State Route 712 (Midway Road) and I-95 approximately 10 1/2 miles west of the St. Lucie Plant. The EOF has sufficient space to accommodate the Florida Power & Light Company response organization and designated representatives of the federal, state, and local authorities. Alternate temporary locations for the Emergency Operations Facility may be designated by the Recovery Manager if a natural disaster or other (non-radiological) external event significantly affects the operational capability of the facility.

The Emergency Operations Facility has an emergency communications network including but not limited to, Local Government Radio (LGR), commercial telephone lines, Hot Ring Down (HRD) phone, NRC ENS, NRC HPN, NRC counterpart links, ESATCOM, and various Florida Power & Light Co. maintained radio systems. Essential, precalculated emergency data and pertinent reports and drawings are readily available.

Activation of the Emergency Operations Facility is the responsibility of the Recovery Manager and is required for a Site Area Emergency or General Emergency. The RM should place the emergency response staff on standby in the facility for an Alert. Arrangements have been made to activate the EOF in a timely manner.

6. Emergency News Center (ENC)

An Emergency News Center (ENC) is provided to allow the news media access to information from the Emergency Operations Facility. The Emergency Information Manager will designate an individual to supervise the ENC. The ENC is co-located with the EOF (Midway Road/I-95 intersection).

7. MAINTAINING EMERGENCY PREPAREDNESS (continued)

7.2 Emergency Response Training

1. Objectives

The primary objectives of emergency response training are as follows:

1. Familiarize appropriate individuals with the Emergency Plan and related implementing procedures.
2. Instruct individuals in their specific duties to ensure effective and expeditious action during an emergency.
3. Periodically present significant changes in the scope or content of the Emergency Plan.
4. Provide refresher training to ensure that personnel are familiar with their duties and responsibilities.
5. Provide the various emergency organization groups with the required training that will ensure an integrated and prompt response to an emergency situation.

2. Training of On-site Emergency Response Organization Personnel

Training programs have been established for personnel working at the plant site. The programs include initial indoctrination and subsequent retraining.

The training program for members of the on-site emergency response organization will include practical drills, as appropriate and participation in exercises, in which each individual demonstrates an ability to perform assigned emergency functions.

The St. Lucie Plant Training Manager is responsible for the conduct and documentation of initial training and annual retraining programs for on-site FPL Emergency Response Organization (ERO) personnel. Emergency teams will receive specific training as specified in the following subsections. The Emergency Planning Coordinator is responsible for the content and accuracy of the Emergency Planning Training. Each new employee permanently assigned to work at the St. Lucie Plant shall be given initial orientation training. For employees not assigned specific responsibility or authority under the Emergency Plan or Procedures, such training shall, at a minimum, provide information describing the action to be taken by an individual discovering an emergency condition, the location of assembly areas, the identification of emergency alarms, and the action to be taken upon hearing those alarms.

7. MAINTAINING EMERGENCY PREPAREDNESS (continued)

7.2 2. Training of On-site Emergency Response Organization Personnel (continued)

For employees with specific assignments or authorities as members of emergency teams, initial training and annual retraining programs will be provided. Training must be current to be maintained on the site Emergency Team Roster. The site Emergency Team Roster is updated by the Plant Training Manager once each calendar month. Security maintains training records for members of the Security.

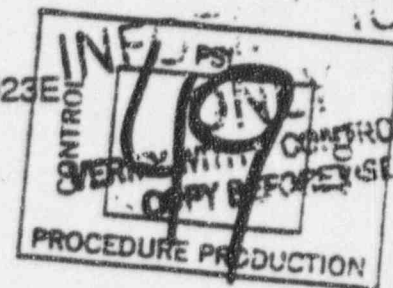
/R3

The following provides a description of the training provided to personnel filling the indicated positions.

1. Emergency Coordinator

- a. Interpretation of plant and field data and how it relates to emergencies and their classification (i.e. emergency action level determination, per Chapter 5).
- b. Prompt and effective notification methods, including the types of communication systems.
- c. Method of activating the Florida Power & Light Company Emergency Response Organization (ERO).
- d. The methods used for estimating radiation doses and recommending off-site protective actions.
- e. Emergency Plan familiarization
- f. Emergency Plan Implementing Procedures (EPIPs) familiarization
- g. Communications and record-keeping methods
- h. Accident assessment and corrective action (licensed operators only).

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE NO. 3100023E
REVISION 72

1.0 TITLE:

ON-SITE EMERGENCY ORGANIZATION AND CALL DIRECTORY

2.0 REVIEW AND APPROVAL:

Reviewed by Facility Review Group _____ 7/25 19 75

Approved by _____ K. N. Harris _____ Plant General Manager _____ 7/29 19 75

Revision 72 Reviewed by F R G _____ 9/12 19 96

Approved by _____ J. Scarola _____ Plant General Manager _____ 9/12 19 96

**THIS PROCEDURE HAS BEEN COMPLETELY REWRITTEN, PLEASE READ
ENTIRE PROCEDURE BEFORE PROCEEDING.**

/R72

3.0 SCOPE:

3.1 Purpose

This procedure provides instructions and phone numbers necessary to activate the On-Site Emergency Organization (see Figure 1) for shift augmentation in response to an emergency declaration. In the appendices are the names, phone numbers and alternates for company emergency personnel, as well as phone numbers of County, State and Federal agencies.

S	OPS
DATE	_____
DOCT PROCEDURE	_____
DOCN	3100023E
SYS	_____
COMP COMPLETED	_____
ITM	72

7

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE NO. 3100023E, REVISION 72
ON-SITE EMERGENCY ORGANIZATION AND CALL DIRECTORY

8.0 INSTRUCTIONS:

- 8.1 Upon notification by the Emergency Coordinator (EC), the on-shift Emergency Response Organization shall assemble and prepare to respond as necessary to the emergency.
- 8.2 Upon notification by the EC, the Duty Call Supervisor (DCS), will initiate staff augmentation in accordance with Figure 3, Staff Augmentation Call Tree. The DCS will use the (automated dialing) Emergency Recall System or Appendix A, Duty Call Supervisor Call Directory, to notify persons to fill the positions of Recovery Manager, TSC Health Physics Supervisor, TSC Supervisor, Emergency Coordinator, Operations Coordinator, TSC Chemistry Supervisor, OSC Supervisor and TSC Security Supervisor.
- 8.3 Instructions for use of the Emergency Recall System are in the ANPS office in either Control Room. If the system is not used continue with the next step. *What if system is used?*
- 8.4 The DCS will record the names of persons filling positions as well as the expected times of arrival at the plant on a form similar to Figure 3.
- 8.5 The Recovery Manager shall determine the action to be taken by EOF Responders.
1. For an Alert, EOF Responders should be notified and placed in a standby status or mobilized to respond to the EOF.
 2. The EOF shall be activated in a Site Area Emergency and/or General Emergency.
- 8.6 Persons filling the positions of TSC HP Supervisor and TSC Chemistry Supervisor will notify the appropriate number of individuals from their respective departments in accordance with Figure 3 (See Appendix B, TSC Health Physics Supervisor and TSC Chemistry Supervisor Call Directory).
- 8.7 The TSC Supervisor (alternate) shall call the necessary persons to establish the minimum staff per Figure 3. He may call additional persons, as necessary (See Appendix C, Technical Support Center Supervisor Call Directory).
- 8.8 The OSC Supervisor (alternate) shall call the necessary persons to establish the minimum staff per Figure 3. He may call additional persons, as necessary (see Appendix D, Operational Support Center Supervisor Call Directory).

September 19, 1996

Florida Power and Light Company
ATTN: Mr. T. F. Plunkett
President - Nuclear Division
P. O. Box 14200
Juno Beach, FL 33408-0420

SUBJECT: NRC SPECIAL INSPECTION REPORT 50-335/96-16 AND 50-389/96-16 AND
NOTICE OF VIOLATION

Dear Mr. Plunkett:

On August 23, 1996, the NRC completed a special inspection involving component tampering events at your St. Lucie reactor facilities. The enclosed report presents the results of that inspection.

Overall, St. Lucie's response to the potential and actual tampering events between May and August 1996 was satisfactory. Some response deficiencies were identified and are discussed in the details of the report. Also, based on the results of this inspection, certain of your activities appeared to be in violation of NRC requirements, as specified in the enclosed Notice of Violation (Notice).

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room (PDR).

Sincerely,

ORIGINAL SIGNED BY ALBERT F. GIBSON

Albert F. Gibson, Director
Division of Reactor Safety

Docket Nos.: 50-335, 50-389
License Nos: DPR-67, NPF-19

Enclosures: 1. Notice of Violation
2. Inspection Report 50-335/96-16
and 50-389/96-16

cc w/encs: (See page 2)

9609240026 OPP

cc w/ends:

J. A. Stall
Site Vice President
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0128

H. N. Paduano, Manager
Licensing and Special Programs
Florida Power and Light Company
P. O. Box 14000
Juno Beach, FL 33408-0420

J. Scarola
Plant General Manager
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0128

E. J. Weinkam
Plant Licensing Manager
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0218

J. R. Newman, Esq.
Morgan, Lewis & Bockius
1800 M Street, NW
Washington, D. C. 20036

John T. Butler, Esq.
Steel, Hector and Davis
4000 Southeast Financial Center
Miami, FL 33131-2398

Bill Passetti
Office of Radiation Control
Department of Health and
Rehabilitative Services
1317 Winewood Boulevard
Tallahassee, FL 32399-0700

Jack Shreve, Public Counsel
Office of the Public Counsel
c/o The Florida Legislature
111 West Madison Avenue, Room 812
Tallahassee, FL 32399-1400

Joe Myers, Director
Division of Emergency Preparedness
Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399-2100

Thomas R. L. Kindred
County Administrator
St. Lucie County
2300 Virginia Avenue
Ft. Pierce, FL 34982

Charles B. Brinkman
Washington Nuclear Operations
ABB Combustion Engineering, Inc.
12300 Twinbrook Parkway, Suite 3300
Rockville, MD 20852

cc w/encs:

J. A. Stall
Site Vice President
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0128

H. N. Paduano, Manager
Licensing and Special Programs
Florida Power and Light Company
P. O. Box 14000
Juno Beach, FL 33408-0420

J. Scarola
Plant General Manager
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0128

E. J. Weinkam
Plant Licensing Manager
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0218

J. R. Newman, Esq.
Morgan, Lewis & Bockius
1800 M Street, NW
Washington, D. C. 20036

John T. Butler, Esq.
Steel, Hector and Davis
4000 Southeast Financial Center
Miami, FL 33131-2398

Bill Passetti
Office of Radiation Control
Department of Health and
Rehabilitative Services
1317 Winewood Boulevard
Tallahassee, FL 32399-0700

Jack Shreve, Public Counsel
Office of the Public Counsel
c/o The Florida Legislature
111 West Madison Avenue, Room 812
Tallahassee, FL 32399-1400

Joe Myers, Director
Division of Emergency Preparedness
Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399-2100

Thomas R. L. Kindred
County Administrator
St. Lucie County
2300 Virginia Avenue
Ft. Pierce, FL 34982

Charles B. Brinkman
Washington Nuclear Operations
ABB Combustion Engineering, Inc.
12300 Twinbrook Parkway, Suite 3300
Rockville, MD 20852

Distribution w/encs:

K. Landis, RII
J. Norris, NRR
B. R. Crowley, RII
G. A. Hallstrom, RII
PUBLIC

NRC Resident Inspector
U.S. Nuclear Regulatory Comm.
7585 South Highway A1A
Jensen Beach, FL 34957-2010

OFFICE	RII DRS	RII DRS	RII DRP	RII NRR	RII DRP	
SIGNATURE						
NAME	KBarr	DThompson	JMunday	LWens	KLandis	
DATE	12 / / 96	12 / / 96	12 / / 96	12 / / 96	12 / / 96	12 / / 96
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY

DOCUMENT NAME: A:196-16R1.KPB

NOTICE OF VIOLATION

Florida Power and Light Company
St. Lucie Nuclear Plant

Docket Nos. 50-335, 50-389,
License Nos. DPR-67, NPF-13,

During an NRC inspection conducted on August 19-23, 1996, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violations are listed below:

- A. 10 CFR 73.71, Reporting of Safeguards Events, Appendix G, (a)(3) Reportable Safeguards Events, requires the licensee to report to the NRC within one hour of discovery, followed by a written report within 30 days, events which cause interruption of normal operations through tampering with controls including the security system.

The licensee's Security Procedure, SP-0006125, Reporting of Safeguards Events, Revision 9, dated April 20, 1995, Paragraph 8.2 (I) defines one of those specific events as being a "confirmed tampering of suspicious origin with safety or security equipment."

Contrary to the above on July 29, 1996, the licensee failed to follow their procedure and report the confirmed tampering with security equipment (locks) within one hour to the NRC.

This is a Severity Level IV violation (Supplement III)

- B. Technical Specification 6.8.1.a requires that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A, paragraph 1.c includes administrative procedures for equipment control. Administrative Procedure No. 2-0010123, "Administrative Control Of Valves, Locks And Switches," Revision 73 implements this requirement with respect to administratively controlled keys. Step 8.2.1 of this procedure states in part that cubicles containing critical controls in remote locations shall be locked and the keys maintained under Administrative Control.

Contrary to the above, on August 19, 1996, keys used for the control of Power Operated Relief Valves V1474 and V1475 located in the 2A and 2B electrical penetration rooms respectively, were located in the unlocked cubicles which house the switches.

This is a Severity Level IV violation (Supplement I).

Pursuant to the provisions of 10 CFR 2.201, Florida Power and Light is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region II, and a copy to the NRC Resident Inspector at the facility that is the subject of this notice within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include

Enclosure 1

~~9609270028~~ app

for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Security or Safeguards Information should be submitted as an enclosure to facilitate withholding it from public disclosure as required by 10 CFR 2.790(d) or 10 CFR 73.21.

Dated at Atlanta, Georgia
this 19th day of September 1996

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 50-335, 50-389
License Nos: DPR-67, NPF-16

Report No: 50-335/96-16, 50-389/96-16

Licensee: Florida Power & Light Co.

Facility: St. Lucie Nuclear Plant, Units 1 & 2

Location: 9250 West Flagler Street
Miami, FL 33102

Date: August 23, 1996

Inspectors: K. Barr, Team Leader
J. Munday, Resident Inspector
L. Wiens, Project Manager
D. Thompson, Security Inspector

Approved by: A. F. Gibson, Director
Division of Reactor Safety

4609270034 spp

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
REPORT DETAILS	5
02.1 May-June 1996 Relief Valve Potential Tampering Events	5
02.1.1 Evaluation and Corrective of Damaged Components	6
02.1.2 Evaluation of Plant System for Additional Tampering	7
02.1.3 Site Management's Response to the May 1996 Event	8
02.2 Summary of the July 1996 Lock Tampering Event	10
02.2.1 Evaluation and Correction of Damaged Components	11
02.2.2 Evaluation of Plant System for Additional Tampering	11
02.2.3 Site Management's Response to July 26, 1996 Tampering Event	12
02.2.4 Implementation of Interim Action to Detect New Tampering	13
S1.2.5 Security Investigation of the Event	13
S1.2.7 Evaluation of Compliance with the Physical Security Plant	14
02.3 Summary of August 1996 Event Concerning Damage to Hot Shutdown Panel Keylock Switches	14
02.3.1 Evaluation and Correction of Damaged Components	15
02.3.2 Evaluation of Plant System for Additional Tampering	15
02.3.3 Site Management's Response to the August 14 Tamper Event	19
02.3.4 Implementation of Interim Actions to Detect New Tampering	21
S1.3.5 Security Investigation of Event	22
02.3.6 Plant Licensing Basis	23
S1.3.7 Evaluation of Compliance with Physical Security Plant	24
INSPECTION PROCEDURES USED	26
ITEMS OPENED, CLOSED, AND DISCUSSED	26
EXIT MEETING SUMMARY	27
PARTIAL LIST OF PERSONS CONTACTED	28
LIST OF ACRONYMS USED	29
Enclosure 2, Attachment A: Chronological Sequence of Events	A-1
Enclosure 2, Attachment B: Information Provided to Licensee By NRC On August 15, 1996	B-1
Enclosure 2, Attachment C: Photographs Showing Valve Locations and Examples Of Damaged Locks and Key Lock Switches	C-1
Enclosure 2, Attachment D: List of Licensee Documents Reviewed	D-1

EXECUTIVE SUMMARY

St. Lucie Nuclear Plant, Units 1 & 2
NRC Inspection Report 50-335/96-16, 50-389/96-16

A Chronological Sequence of Events was established by the inspection team. That listing is contained in Enclosure 2, Attachment A to this report.

Overall, the licensee's response to the potential and actual tampering events between May and August 1996 was satisfactory. Some response deficiencies were identified and are discussed in the details of the report. In addition, two violations of regulatory requirements were identified for (1) failure to make a report to NRC under 10 CFR 73 concerning damaged locks and (2) failure to follow procedure concerning control of keys to critical controls. An unresolved item (URI) was identified concerning differences between the Updated Final Safety Analysis Report (UFSAR) description of the Hot Shutdown Panel (HSDP) for Unit 1 and the instrumentation actually installed. An inspector follow item (IFI) was identified for follow up on final implementation of interim actions to detect new tampering in a more timely manner.

In May and June 1996, the licensee identified two pressure relief valves which, when tested, were found to have pressure setpoints 55 percent and 9 percent above their design values. These valves were also found to have broken wire seals. The licensee's documented technical evaluation identified, as possible root causes, tampering or unauthorized work by plant personnel. Licensee management subsequently determined the valve anomalies were not due to tampering.

Through discussions with the licensee and documentation review, the inspectors concluded that the licensee's policy on the use of wire seals was inconsistent. There were no clear instructions to apply wire seals and, as a result, a number of valves did not have seals attached.

Based on independent review of the documented facts, observations of the installed valve configurations, and the effort required to access the valve spring tension mechanisms, the inspectors concluded that tampering, although it could not be conclusively ruled out, was not likely to have occurred in either of these specific cases. A person knowledgeable enough about relief valve operation to tamper with the valves could use an easier method to prevent proper operation of the valve. The more likely cause for the misadjusted valve was poor maintenance practices.

The inspectors verified through documentation review that the two valves were either replaced or repaired.

The inspectors verified through documentation review, that the V2325 setpoint was adjusted, properly tested and the valve reinstalled in the system.

The inspectors concluded that site management appropriately pursued identification of the cause for relief valve V3483 having a high setpoint. In addition, because of the broken wire valve seal, appropriate walkdowns were conducted to determine the extent of possible valve tampering. Once the extent was established, management appropriately evaluated and dispositioned the deficiencies.

Since tampering with valves V2325 and V3483 could not be conclusively ruled out, management's decision to alert Security of the tampering possibility was appropriate. However, due to a communications lapse, site Security was not notified. The inspectors also concluded that failure to follow through on alerting Site Security precluded actions to enhance security force awareness to other possible tampering events.

The inspectors determined that the event would not have been required to be reported to the NRC. However, the Security Manager should have been informed of the event because Security Procedure, Reporting of Safeguards Events, SP-0006125, Paragraph 5.2 states that "the plant security supervisor is responsible for making report ability determination under 10 CFR Part 73.71."

On July 26, 1996, eleven examples of actual padlock and door lock tampering were identified. Nine padlocks and two door locks were found to have been intentionally damaged by having foreign material injected into the lock cores. These locks controlled personnel access to various pieces of plant equipment.

The damaged locks were repaired and verified operational.

Although the licensee's response to the damaged locks was completed in a timely manner, the extent of condition evaluation did not identify keylock switches as other locking devices that needed to be checked for damage.

Management's response to the July event was not thorough in that keylock switches were not checked for damage until August.

Identification of tampering of components within the vital area of the plant demonstrated that additional tampering could likely occur. Therefore, the licensee should have considered additional measures to detect new tampering of equipment at the site in addition to alerting the Security force.

The Corporate investigative staff adequately reviewed the event.

The licensee failed to follow their procedure and report the confirmed tampering with the security equipment (locks) to NRC within one hour. This is a violation of regulatory requirements.

On August 14, 1996, three additional examples of actual lock tampering were identified. The lock mechanisms of the two keylock switches on the Unit 2 HSDP and the keylock switch on the Unit 1 HSDP were found to be intentionally damaged by having foreign material injected into the lock cores. These were the only keylock switches on the panels.

The inoperable Unit 1 power operated relief valve (PORV) control switch and the Unit 2 "A" and "B" channel safety injection actuation system (SIAS) bypass switches were replaced and operability was adequately verified.

Following extensive reviews done by the licensee and independent verifications by NRC, the inspectors concluded there was no evidence of additional tampering.

The inspectors identified that keys to operations equipment were not properly maintained in accordance with procedural requirements. This represents a violation for failure to follow procedural requirements.

Site management satisfactorily evaluated, consistent with the known examples of tampering, the operational capability of the plant safety systems to perform their intended safety functions.

Site management satisfactorily evaluated plant areas for foreign material and abnormalities.

Site management did not use all available plant documentation of equipment deficiencies (e.g., plant work orders) in its search for additional examples of tampering.

Site management should have been more proactive in establishing interim actions to detect new tampering in a more timely manner by using plant staff observers as well as Security force members. The interim actions subsequently identified by plant management, if properly implemented, should provide reasonable assurance that new tampering were be promptly detected.

The security force implemented good preventative measures to detect or prevent new tampering with plant equipment.

The licensee took appropriate and extensive actions to determine the individual(s) involved in the lock tampering event(s).

With one exception, the design and installation of the HSDPs for St. Lucie Units 1 and 2 were in accordance with the licensing basis of the plants. The FSAR description of the controls and instruments installed on the HSDP for St. Lucie Unit 1 did not match the installed equipment in that the FSAR description did not indicate the installed nuclear instruments. The failure of the FSAR to correctly describe the installed equipment is identified as an URI.

Control of access to the HSDP rooms of St. Lucie Unit 1 and 2 was in accordance with the approved PSP for the site.

The licensee was in compliance with the site PSP regarding access controls, patrols, alarm station operations, fitness for duty and access authorization.

During this site inspection, the inspectors independently reviewed a large number of plant records of Condition Reports (CRs) and Nuclear Plant Work Orders (NPWOs) in an attempt to identify any previously unidentified tampering events. No new tampering events were identified by the team.

Enclosure 2, Attachment B contains information provided to St. Lucie site management by NRC to assist in the site's response to the events. The attachment contains NRC Information Notice 83-27 concerning deliberate acts directed against plant equipment and internal NRC guidance for plant system checkout following suspected sabotage.

Enclosure 2, Attachment C contains illustrative photographs of the valves, padlocks and keylock switches that were the subject of this inspection.

c. Conclusion

The Corporate investigative staff adequately reviewed the event.

S1.2.7 Evaluation of Compliance with the Physical Security Plan

a. Inspection Scope

Determine if the licensee was in compliance with their PSP and Procedures.

10 CFR 73.71, Reporting of Safeguards Events, Appendix G, (3) Reportable Safeguards Events, requires the licensee to report to the NRC within one hour of discovery, followed by a written report within 30 days, events which cause interruption of normal operations through tampering with controls including the security system.

b. Observations and Findings

The licensee's Security Procedure, SP-0006125, Reporting of Safeguards Events, Revision 9, dated April 20, 1995, Paragraph 8.2 (I) defines one of those events as being a "confirmed tampering of suspicious origin with safety or security equipment."

On July 29, 1996, the licensee failed to follow their procedure and report the confirmed tampering with the security equipment (locks) within one hour to the NRC. This is a violation (VIO) of regulatory requirements (VIO 50-335/98-16-01, 50-389/96-16-01, Failure to report an event to NRC within one hour).

c. Conclusion

The licensee failed to comply with requirements for reporting the event to the NRC.

O2.3 Summary of August 1996 Event Concerning Damage to Hot Shutdown Panel Keylock Switches

On August 14, 1996, during a monthly surveillance of the Unit 2 HSDP at about 10:00 a.m., a plant operator discovered two key switches could not be operated because foreign material precluded the insertion of the keys into their locks. These were the only key switches on the Unit 2 HSDP. Each St. Lucie unit has an HSDP that was designed to be used to shutdown the unit from outside the unit main control room. The two damaged key lock switches operated channels A and B, respectively, of the SIAS to block unwanted actuation of the Safety Injection (SI) system during unit cool down.

Upon identification of the damaged Unit 2 key lock switches, a check of the HSDP for Unit 1 was conducted. The Unit 1 HSDP contained only one key switch on the panel. Similar to Unit 2, that key lock switch could not be operated because of foreign material in the lock mechanism. The damaged key lock switch operated the pressurizer PORV which provides a backup means to control primary system pressure if auxiliary pressurizer spray becomes unavailable while bringing the unit to a controlled shutdown condition.

NOVEMBER 15, 1996

EA 96-458

Florida Power and Light Company
ATTN: Mr. T. F. Plunkett
President - Nuclear Division
P. O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: NRC INSPECTION REPORT NOS. 50-333/96-19 AND 50-389/96-19

Dear Mr. Plunkett:

This refers to the inspection conducted on October 21 - 25, 1996, at the St. Lucie facility. The enclosed report presents the results of this inspection.

Based on the results of this inspection, two apparent violations were identified and are being considered for escalated enforcement action in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600. The apparent violations pertain to your failure to limit unescorted access to protected and vital areas during non-emergency conditions and your failure to report that event under the criteria specified in 10 CFR 73.71. Accordingly, no Notice of Violation is presently being issued for these inspection findings. In addition, please be advised that the number and characterization of apparent violations described in the enclosed inspection report may change as a result of further NRC review.

A predecisional enforcement conference to discuss these apparent violations has been scheduled for December 10, 1996. The decision to hold a predecisional enforcement conference does not mean that the NRC has determined that a violation has occurred or that enforcement action will be taken. This conference is being held to obtain information to enable the NRC to make an enforcement decision, such as a common understanding of the facts, root causes, missed opportunities to identify the apparent violations sooner, corrective actions, significance of the issues and the need for lasting and effective corrective action. In particular, we expect you to address the breakdown of your access control program within the Florida Power and Light Company organization. In addition, this is an opportunity for you to point out any errors in our inspection report and for you to provide any information concerning your perspectives on 1) the severity of the violations, 2) the application of the factors that the NRC considers when it determines the amount of a civil penalty that may be assessed in accordance with Section VI.B.2 of the Enforcement Policy, and 3) any other application of the Enforcement Policy to this case, including the exercise of discretion in accordance with Section VII.

~~9612070001~~ 4PP

This conference will be closed to public observation in accordance with the Commission's continuing trial program as discussed in Section V of the NRC Enforcement Policy, NUREG 1600 (Enclosure 2).

You will be advised by separate correspondence of the results of our deliberations on this matter. No response regarding these apparent violations is required at this time.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

Sincerely,

ORIGINAL SIGNED
BY ALBERT GIBSON

Albert F. Gibson, Director
Division of Reactor Safety

Docket Nos. 50-335, 50-389
License Nos. DPR-67, NPF-16

Enclosures: 1. Inspection Report 50-335, 389/96-19
2. NUREG 1600, Enforcement Policy

cc w/encl:

J. A. Stall
Site Vice President
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0128

H. N. Paduano, Manager
Licensing and Special Programs
Florida Power and Light Company
P. O. Box 14000
Juno Beach, FL 33408-0420

J. Scarola
Plant General Manager
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0128

(cc w/encs cont'd - See page 3)

(cc w/encs cont'd)

E. J. Weinkam
Plant Licensing Manager
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0218

M. S. Ross, Attorney
Florida Power & Light
11770 US Highway 1
North Palm Beach, FL 33408

John T. Butler, Esq.
Steel, Hector and Davis
4000 Southeast Financial Center
Miami, FL 33131-2398

Bill Passetti
Office of Radiation Control
Department of Health and
Rehabilitative Services
1317 Winewood Boulevard
Tallahassee, FL 32399-0700

Joe Myers, Director
Division of Emergency Preparedness
Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399-2100

Thomas R. L. Kindred
County Administrator
St. Lucie County
2300 Virginia Avenue
Ft. Pierce, FL 34982

Distribution w/encs:

K. Landis, RII
J. Norris, NRR
B. R. Crowley, RII
G. Hopper, RII
G. A. Hallstrom, RII
PUBLIC

Distribution w/encs cont'd - See page 4:

FP&L

4

Distribution w/encs cont'd:
NRC Resident Inspector
U.S. Nuclear Regulatory Comm.
7585 South Highway A1A
Jensen Beach, FL 34957-2010

RECEIVED	RTI DBS	RTI DBP	RTI DBS	RTI EIC	RTI RC	RTI DBS
SIGNATURE						
NAME	STRATTON JC	JULIAN	VERRELLI	URC	EVANS	GIBSON
DATE	11 / 14 / 96	11 / 15 / 96	11 / 15 / 96	11 / 15 / 96	11 / 15 / 96	11 / 15 / 96
COPY?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

OFFICIAL RECORD COPY

DOCUMENT NAME: S:\DRS\STB\9614.SL

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 50-335, 50-389
License Nos: DPR-67, NPF-16
Report Nos: 50-335/96-19, 50-389/96-19
Licensee: Florida Power and Light Company
Facility: St. Lucie Nuclear Plant Units 1 and 2
Location: 9250 West Flagler Street
Miami, FL 33102
Dates: October 21 - October 25, 1996
Inspector: L. Stratton, Safeguards Inspector
Approved by: Paul E. Fredrickson, Chief
Special Inspection Branch
Division of Reactor Projects

ENCLOSURE 1

~~961207002~~ SPP

EXECUTIVE SUMMARY

St. Lucie Nuclear Plant Units 1 and 2 NRC Inspection Report 50-335/96-19, 50-389/96-19

This routine announced inspection was conducted in the area of plant support by a regional safeguards specialist. The specific area evaluated was the Physical Security Program for Power Reactors.

- Portions of the licensee's Fitness for Duty program with respect to adulterated samples and the appeal process were reviewed and found to be in accordance with requirements (10 CFR 26 (S1.3)).
- The licensee's failure to prevent unauthorized unescorted access into the protected area and potential access into vital areas is an apparent violation of regulatory requirements. (S2.1)
- The licensee's failure to log in the Safeguard Event Logs or make a one hour report within the required time with respect to the access control events described in Paragraph S2.1b is an apparent violation of regulatory requirements. (S4.1)
- The Training and Qualification Plan was reviewed with respect to conducting physical fitness tests of security personnel and found to meet the requirements. (S5.1)
- Through document review and interview of licensee representatives, the inspector determined that the portion of the audit program evaluated was adequate.

REPORT DETAILS

S1 Conduct of Security and Safeguards Activities

S1.3 Fitness for Duty

a. Inspection Scope (81502)

In accordance with 10 CFR 26.10(a), the licensee must provide reasonable assurance that nuclear power plant personnel will perform their tasks in a reliable and trustworthy manner and are not under the influence of any substance, legal or illegal, or mentally or physically impaired from any cause, which in any way could adversely affect their ability to safely and competently perform their duties.

b. Observations and Findings

On October 21, 1996, at the Florida Power and Light (FP&L) Company corporate offices, the inspector reviewed ten randomly selected records to verify compliance with 10 CFR 26. The inspector noted that one record documented that an individual was given a chemical test on January 4, 1996; however, the test result was documented as a "refusal." Upon further discussion with licensee representatives, the inspector learned that a confirmed adulterated sample was documented as a refusal by the licensee. On January 5, 1996, the licensee's contract laboratory's report documented that the sample appeared to have a "soapy" presence. Upon request from the licensee's Medical Review Officer (MRO), the contract laboratory sent the possible adulterated sample to another independent laboratory for review. That laboratory confirmed the presence of an anionic surfactant. The licensee determined this was a failure to cooperate with the testing requirements, therefore deemed the test results as a refusal. The individual was again tested by observation on January 5, 1996, with the results being negative.

10 CFR 26 requires that when an individual's test results are confirmed positive, the licensee must offer an appeal process to that individual. Since the results of the individual's test discussed above was categorized as a refusal, the licensee did not offer an appeal under 10 CFR 26. However, the inspector noted that on June 24, 1995, the individual was given an appeal based on 10 CFR 73.56, access authorization requirements. The licensee informed the inspector that since the sample was confirmed adulterated, the individual's trustworthiness and reliability were in question. Therefore the suspension of his unescorted access was appealed, rather than the adulterated sample results.

The appeal board suggested reversing the denial of unescorted access based on the individual's willingness to cooperate; the fact that FP&L's policy did not adequately address adulteration; and the individual's second negative sample. The licensee is currently evaluating the case.

c. Conclusions

Through document review and discussion with licensee representatives, the inspector concluded that the portions of 10 CFR 26 that were reviewed met regulatory requirements. There were no violations of regulatory requirements noted.

S2 Status of Security Facilities and Equipment

S2.1 Protected and Vital Area Access Control

a. Inspection Scope (81700)

10 CFR 73.55(d)(7) requires that licensee's shall establish an access authorization system to limit unescorted access to vital areas during non-emergency conditions to individuals who require access in order to perform their duties.

The licensee's Physical Security Plan (PSP), Revision 48, dated 2/23/96 states, "Only those individuals with identified need for access and having appropriate authorization, shall be granted unescorted Vital Area access."

b. Observations and Findings

The licensee documented on August 19, 1996, in Condition Report (CR) 96-2041 that an individual was presented a FP&L severance package on July 17 and upon returning to St. Lucie on August 14, learned his badge was never deactivated. In response to the CR, the licensee determined an administrative error had occurred and this error was an isolated event.

On September 19, 1996, the licensee's access coordinator determined that three other former FP&L employees who were favorably terminated in July continued to have active badges to the St. Lucie facility. The access coordinator immediately removed the individuals' access from the security computer.

On October 9, 1996, the licensee discovered that one of the individuals determined not to need access on September 19, had entered into the protected area on five different occasions on August 7, August 9, and August 15, 1996. The individual did not enter vital areas on these dates. Upon interview, the licensee learned the individual had returned to the site for a job interview and to "generally talk to some people."

In response to the discovery, the licensee initiated an audit on October 21, 1996, for the period of January 1, 1996 to the present of individuals who had been terminated. The audit, which was completed October 31, 1996, encompassed checking 594 individuals' names/social security numbers against active badges in the security computer. Through this corrective action, the licensee discovered six additional individuals; two with access to St. Lucie; three with access to Turkey Point, and one

with access to both facilities. All six individuals subsequently identified had not accessed the protected or vital areas after the date of their termination. Upon discovery, the licensee deactivated those individuals' badges.

The inspector reviewed Administrative Procedure (AP) 10509, "Personnel and Material Control," Revision 18, dated September 30, 1996. The procedure clearly states the responsibility to notify security that an individual is terminated rests with (1) the individual to turn in his security badge; (2) department head and supervisors to notify security when unescorted access is no longer required; and (3) the Plant Resource Control Supervisor or Human Resources to notify security of personnel changes. However, all three avenues of the procedure failed to be implemented. The inspector did note that although the procedure clearly states responsibility, a termination of access form/checklist was not provided, which could possibly ensure hardcopy documentation in the event security was not notified.

c. Conclusions

The licensee's failure to prevent unauthorized unescorted access into the protected area and potential access into vital areas is noted as an apparent violation of regulatory requirements (10 CFR 73.55 (d)(7) and EEl 50-335, 50-389/96-19-01).

S4 Security and Safeguards Staff Knowledge and Performance

S4.1 Records and Reports

a. Inspection Scope (81038)

10 CFR 73.71, states that an actual entry of an unauthorized person into a protected area or vital area be reported within one hour of discovery.

10 CFR 73.71, states that any failure, degradation, or discovered vulnerability in a safeguards system that could have allowed unauthorized or undetected access to a protected area or a vital area had compensatory measures not been established, be recorded within 24 hours of discovery in the safeguards event log.

b. Observations and Findings

Upon review of the access control event detailed in Paragraph S2.1b, the inspector reviewed Security Procedure (SP) 6125, "Reporting of Safeguards Events," Revision 10, dated October 9, 1996. The procedure accurately outlines the provisions specified in 10 CFR 73.71, Appendix G. However, on September 19, 1996, the licensee failed to document in the Safeguards Event Log (SEL) the possibility of three individuals having unescorted access to protected and vital areas. In addition, on October 9, 1996, the licensee failed to make a one hour report when they discovered that one of the individuals who maintained unescorted access after termination, actually entered the protected area on five occasions. Upon further review, the

licensee determined that a one hour report was warranted. On October 16, 1996, the licensee made a one hour report to the NRC under the provisions of 10 CFR 73.71.

c. Conclusions

The licensee's failure to log in the SEL or make a one hour report within the required time with respect to the access control events described in Paragraph S2.1b is an apparent violation of regulatory requirements (EEI 50-335, 50-389/96-19-02).

S5 Security Safeguards Staff Training and Qualification

S5.1 Security Training and Qualification

a. Inspection Scope (81700)

The inspector reviewed the security training and qualification (T&Q) program to ensure that the criteria specified in the licensee's T&Q plan were being met in the area of conducting physical fitness tests for security personnel.

b. Observations and Findings

The inspector reviewed T&Q Plan Implementing Instruction, Revision 2, dated September 9, 1996, to verify the licensee was conducting the physical fitness test for security personnel in accordance with the requirements of the T&Q Plan. The inspector noted that Attachment 3 had been added to the procedure, which is a detailed instruction on conducting the physical fitness test. Prior to this revision, the procedure only documented what the test entailed and the time period required to perform the test. Attachment 3 denotes specific material required and detailed guidelines to ensure all physical fitness tests are performed consistently.

The inspector noted the procedure specifies that if an individual fails to pass the required physical fitness test within 72 hours a second attempt may be made. However, on one occasion, an individual did fail both attempts to pass the physical fitness test by not meeting the required time allowance, yet was allowed to make a third attempt. Further discussion with licensee representatives revealed that those two attempts at the physical fitness test were prior to the addition of Attachment 3 to the T&Q Plan Implementing Instruction. The licensee determined that those two tests may not have been conducted consistently, therefore allowing an error in the actual timekeeping. However, since the test is now better standardized, the timekeeping margin of error has been eliminated. The licensee considers this individual's second attempt as a re-test rather than a second try.

c. Conclusions

Through interview of security personnel and procedural review, the inspector determined that the licensee was meeting the provisions of the T&Q Plan with respect to physical fitness testing.

S7 Quality Assurance in Security and Safeguards Activities

S7.1 Audits

a. Inspection Scope (81700)

Chapter 14, of the licensee's Physical Security Plan, Revision 48, dated February 23, 1996, denotes the security program shall be audited no less frequently than once every 12 months.

b. Observations and Findings

The inspector reviewed a portion of the Security and Safeguards Information - Functional Area Audit QSL-OPS-96-03, dated April 22, 1996 to verify that the required elements of the security program were reviewed. The audit was performed by the Quality Assurance Department, located at FP&L's corporate offices. The audit report was furnished to site and corporate management as appropriate. Numerous strengths were noted in the areas of security's self-assessment program, tracking and trending of personnel and hardware performance, and unannounced crucial tasking of security officers. Two technical recommendations were noted:

- (1) Land Utilization Procedure LU-QI-11.0-20 be revised to include dimensional verification (to ensure the 96 square in limit is met) of selected panels during safe-net inspections.
- (2) Substitute the simulated crawl test (conducted with a sled and aluminum ball) with another method described in Regulatory Guide 5.44.

The inspector noted that the audit report covered AP-10509, "Personnel and Material Control;" however, no findings by the auditors were documented. Further evaluation of the licensee's audit program for security will be reviewed in future inspections.

c. Conclusions

Through document review and interview of licensee representatives, the inspector determined that the portion of the audit program evaluated was adequate.

S8 Miscellaneous Security and Safeguards Issues

S8.1 Action of Previous Inspection Findings (92904)

(DISCUSSED) IFI 96-010. This IFI will remain open pending the completion and future performance of the licensee's FFD program.

S8.2 Followup on Tampering Event

In response to the recent tampering events that occurred at St. Lucie, the licensee had initiated additional measures as noted below:

- At the time of this inspection, twelve boxes in remote locations in various vital areas to house a camera and a VCR were in place. The licensee plans to have a total of 19 locations. All locations will have a camera installed.
- Two VCRs with a backup battery capacity of 720 hours. These two VCRs will be rotated to two of the nineteen locations every 24 hours, with one VCR per unit. The licensee implemented these additional measures beginning October 4, 1996.
- The evening Security Shift Supervisor will be responsible for selecting the location and ensuring the VCR is installed.
- All VCR boxes are locked with security controlled keys.
- The inspector noted that temporary extension cords were currently being used to support the operation of the cameras and VCRs. The licensee informed the inspector they plan to run the cords through the existing cabling after an engineering study has been performed sometime in late November.
- The two extra patrols the licensee had in place are no longer being utilized.
- All nineteen locations have signs in the area warning personnel of the possibility of being observed by remote cameras.
- The tapes will be maintained for approximately two weeks, according to the implementing procedure.

The inspector and a security shift specialist performed a walkdown of vital areas to observe the boxes that were currently installed. Additionally, the inspector reviewed tapes of several locations to determine if the angle position of the cameras was adequate. All cameras captured ingress and egress points of particular vital equipment selected to be viewed.

Management Meetings

X1 Exit Meeting Summary

The inspector presented the inspection results to licensee management at the conclusion of the inspection on October 25, 1996. The inspector noted and discussed two apparent violations with respect to access control and reportability requirements. The licensee acknowledged the findings presented. Although reviewed during this inspection, proprietary information is not contained in this report. Dissenting comments were not received from the licensee.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

D. Bonthron, Access Program Supervisor, Florida Power and Light (FP&L)
 A. Cummings, Fitness for Duty Coordinator, St. Lucie Nuclear (SLN)
 S. Plantz, Security Training, SLN
 J. Scarola, General Manager, SLN
 E. Weinkam, Licensing Manager, SLN
 W. White, Security Manager, SLN

NRC

M. Miller, Senior Resident Inspector

INSPECTION PROCEDURES USED

IP 81038: Reporting Requirements
 IP 81502: Fitness for Duty Program
 IP 81700: Physical Security Program for Power Reactors
 IP 92904: Action on Previous Inspection Findings

ITEMS OPEN, CLOSED, AND DISCUSSED

Opened

50-335, 50-389/96-19-01	EEI	Failure to limit unescorted access to protected and vital areas during non-emergency conditions to individuals who require access in order to perform their duties.
50-335, 50-389/96-19-02	EEI	Failure to report an event under the criteria of 10 CFR 73.71

Discussed

50-335, 50-389/96-10	IFI	FFD Staff Reorganization and Corrective Actions
----------------------	-----	---

ENCLOSURE 1



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W., SUITE 2900
ATLANTA, GEORGIA 30333-0199
November 26, 1996

EA 96-464

Florida Power and Light Company
ATTN: Mr. T. F. Plunkett
President - Nuclear Division
P. O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: NRC INSPECTION REPORT NOS. 50-335/96-18 AND 50-389/96-18

Dear Mr. Plunkett:

This refers to the inspection conducted during the period October 7 - November 1, 1996, at your St. Lucie facility. The enclosed report presents the results of this inspection, as well as a summary of follow-up telephonic conferences conducted on November 14, 25, and 26, 1996.

Based on the results of this inspection, three apparent violations were identified and are being considered for escalated enforcement action in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600. These apparent violations were concerned with 1) failure to adequately maintain the capability for timely augmentation of your Emergency Response Organization during off-hours, 2) failure to establish and maintain adequate procedures for the implementation of certain requirements contained in the Radiological Emergency Plan, and 3) failure to adequately implement multiple aspects of your training program for Emergency Response Organization personnel. Accordingly, no Notice of Violation is presently being issued for these inspection findings. In addition, please be advised that the number and characterization of apparent violations described in the enclosed inspection report may change as a result of further NRC review.

A predecisional enforcement conference to discuss these apparent violations has been scheduled for December 10, 1996. The decision to hold a predecisional enforcement conference does not mean that the NRC has determined that a violation has occurred or that enforcement action will be taken. This conference is being held to obtain information to enable the NRC to make an enforcement decision, such as a common understanding of the facts, root causes, missed opportunities to identify the apparent violations sooner, corrective actions, significance of the issues and the need for lasting and effective corrective action. In addition, this is an opportunity for you to point out any errors in our inspection report and for you to provide any information concerning your perspectives on 1) the severity of the violations, 2) the application of the factors that the NRC considers when it determines the amount of a civil penalty that may be assessed in accordance with Section VI.B.2 of the Enforcement Policy, and 3) any other application of the Enforcement Policy to this case, including the exercise of discretion in accordance with Section VII. We also bring to your attention the fact that an apparent deviation from commitments made to the NRC was identified during the inspection, and will be discussed during the conference. No Notice of Deviation is presently being issued for this inspection finding.

9612060234 2nd

You will be advised by separate correspondence of the results of our deliberations on this matter. No response regarding these apparent violations or deviation is required at this time.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

Sincerely,

ORIGINAL SIGNED BY A. F. GIBSON

Albert F. Gibson, Director
Division of Reactor Safety

Docket Nos. 50-335, 50-389
License Nos. DPR-67, NPF-16

Enclosure: Inspection Report 50-335/96-18, 50-389/96-18

cc w/enc:

J. A. Stall
Site Vice President
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0128

H. N. Paduano, Manager
Licensing and Special Programs
Florida Power and Light Company
P. O. Box 14000
Juno Beach, FL 33408-0420

J. Scarola
Plant General Manager
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0128

E. J. Weinkam
Plant Licensing Manager
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0218

M. S. Ross, Attorney
Florida Power & Light
11770 US Highway 1
North Palm Beach, FL 33408

John T. Butler, Esq.
Steel, Hector and Davis
4000 Southeast Financial Center
Miami, FL 33131-2398

Bill Passetti
Office of Radiation Control
Department of Health and
Rehabilitative Services
1317 Winewood Boulevard
Tallahassee, FL 32399-0700

Joe Myers, Director
Division of Emergency Preparedness
Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399-2100

Thomas R. L. Kindred
County Administrator
St. Lucie County
2300 Virginia Avenue
Ft. Pierce, FL 34982

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-335, 50-389
License Nos: DPR-67, NPF-16

Report No: 50-335/96-18, 50-389/96-18

Licensee: Florida Power and Light Company

Facility: St. Lucie Plant, Units 1 and 2

Location: 9250 West Flagler Street
Miami, FL 33102

Dates: October 7-18 and October 28-November 1, 1996

Inspectors: James L. Kreh, Radiation Specialist
Daniel M. Barss, Emergency Preparedness Specialist

Approved by: Albert F. Gibson, Director
Division of Reactor Safety

Enclosure

9612060240 JRP

EXECUTIVE SUMMARY

St. Lucie Plant, Units 1 and 2
NRC inspection Report Nos. 50-335/96-18, 50-389/96-18

The purpose of this special inspection was to review and evaluate the onsite emergency preparedness (EP) program. Significant negative findings were identified, including three apparent violations, one apparent deviation, one Unresolved Item, and one EP Program Weakness.

Apparent Violations

- ▶ During the approximate period July 22-October 3, 1996, the licensee failed to maintain the capability to execute the provisions of the Radiological Emergency Plan (REP) and the associated Emergency Plan Implementing Procedures (EPIPs) in a timely manner with respect to mobilization of the Emergency Response Organization (ERO) during off-hours (Section P2.1).
- ▶ The EPIPs did not adequately implement the requirements of the REP in the following respects: (a) recovery activities, discussed conceptually in REP Section 5.4, were not adequately addressed in EPIPs; (b) the EPIPs did not adequately describe and delineate the licensee's ERO and the detailed means for notifying ERO members in an emergency; and (c) REP Section 2.4.4 regarding OSC relocation was not adequately implemented by the EPIPs (Section P3.2).
- ▶ The licensee failed to implement the training program for ERO personnel as specified in the REP and EPIPs since at least 1994, as evidenced by the: (a) failure to provide annual retraining to certain designated personnel in 1994 and 1995, (b) failure to provide any training for certain ERO positions with respect to selected implementing procedures, and (c) failure to remove individuals from the ERO roster when their qualifications had lapsed (Sections P5.1, P5.3, P5.4).

Apparent Deviation

- ▶ The licensee failed to relocate the requirements formerly found in Technical Specifications 6.8.1.d and 6.8.1.e to the Security Plan and Emergency Plan, respectively, in accordance with written commitments to the NRC (Section P3.1).

Unresolved Item

- ▶ The ERO training program, described in REP Section 7.2.2, did not, as implemented, include a programmatic method to ensure that each ERO member demonstrated an ability to perform assigned emergency functions through participation in exercises and/or drills (Section P5.2).

Emergency Preparedness Program Weakness

- ▶ Management failed to ensure the implementation of timely corrective actions for certain emergency preparedness deficiencies and weaknesses. Examples include: (a) failure to resolve concerns regarding the audibility of the Gaitronics (or plant public-address system) formally identified in late 1994; (b) failure to provide timely corrective action to address a questionable capability for notification of the State of Florida within 15 minutes of an emergency declaration; and (c) failure to implement timely corrective actions for deficiencies and recommendations identified by the critique of the Hurricane Erin response in August 1995 (Section P7.1).

Positive Observations

- ▶ Good progress has been made in the last several months to develop and implement corrective actions to address the large number of open concerns in the St. Lucie emergency preparedness program (Section P7.1).
- ▶ Significant improvements in the emergency preparedness training program have been initiated (Section P5.1).

REPORT DETAILS

P2 Status of EP Facilities, Equipment, and Resources

P2.1 Mobilization of the Emergency Response Organization

a. Inspection Scope (82701)

The inspectors reviewed the licensee's strategy and provisions for notification and mobilization of its personnel in the event of an off-hour emergency declaration requiring activation and staffing of emergency response facilities (ERFs). In addition to the Control Room, the licensee's ERFs comprised an onsite Operational Support Center (OSC) and Technical Support Center (TSC) and an offsite Emergency Operations Facility (EOF). This review included evaluation of the adequacy and implementation of the following Emergency Plan Implementing Procedures (EPIPs):

- ▶ EPIP 3100021E, Duties and Responsibilities of the Emergency Coordinator, Revision 43, approved September 12, 1996.
- ▶ EPIP 3100023E, On-Site Emergency Organization and Call Directory, Revision 72, approved September 12, 1996.

b. Observations and Findings

Section 2.4 of the Radiological Emergency Plan (REP) described the licensee's methodology for notification of the emergency response organization (ERO) in the event of an emergency declaration at the Alert level or higher. In such a circumstance, timely staffing and activation of the TSC and OSC (and the EOF at a Site Area Emergency or General Emergency declaration) would be required, except possibly for situations in which the declaration is terminated rapidly following resolution of the adverse initiating condition.

The implementing details for the ERO notification methodology were located in EPIP 3100023E. Step 8.2 of the instructions in that procedure specified that on-shift staff augmentation, when required, was initiated from the Control Room by means of either the automated system known as the Emergency Recall System (informally called "autodialer") or the manual backup system utilizing Appendix A, "Duty Call Supervisor [DCS] Call Directory", of the procedure.

On the evening of October 3, 1996, the licensee initiated a staff augmentation test using the autodialer. The system did not operate, and no individuals received notifications during the test. No attempt was made at that time to conduct the test using the backup method. A failure assessment by the licensee disclosed that the autodialer had been in an inoperable configuration from about July 22 through October 3, 1996. According to the licensee, this configuration resulted when the autodialer computer was rebooted without first closing the database file that compiled personnel information used in the notification scheme. The inoperability of the autodialer could have been identified much earlier than October 3 had periodic

Enclosure

functional tests (e.g., weekly) been performed to verify that the system was in an operable configuration. With appropriate administrative controls in place, as had been recommended by a member of the EP staff as early as April 1996, together with testing, extended periods of autodialer inoperability would almost certainly have been precluded. An earlier, limited-scope autodialer problem occurred during the NRC-evaluated June 1993 exercise (see Exercise Weakness 50-335, 50-389/93-16-04: Failure to activate the EOF in a timely manner). Review of licensee documentation also disclosed that an ERO augmentation drill conducted on December 14, 1994 utilizing the autodialer was unsuccessful because of technical problems with the system. Corrective actions for these previous problems were not sufficiently comprehensive to detect the recent system malfunction.

The manual backup augmentation method was a "call-tree" strategy (displayed graphically in Figure 3 of EPIP 3100023E) which depended upon notification by the DCS of persons away from the plant site, with some of those persons subsequently responsible for notifications of others. The inspectors reviewed the details of how, and by whom, the manual call-out process would be implemented. The inspectors interviewed 14 of the 17 persons whose names were listed in Appendix A of EPIP 3100023E as call-tree functionaries who would need to have the current version of that procedure available if contacted by the DCS during off-hours in order to notify others in the call tree. Three individuals listed in Appendix A for the position of TSC Chemistry Supervisor and one individual listed as OSC Supervisor acknowledged that, prior to October 1, 1996, they did not maintain a copy of EPIP 3100023E at home and were not fully cognizant of their assignments in the call-tree scheme. Most interviewees stated that they attempted to maintain a copy of EPIP 3100023E at home, but, without appropriate controlled distribution, may not have had the up-to-date revision. Prior to October 10, 1996, only 3 of the 17 referenced individuals were on the list for controlled distribution of EPIP 3100023E, which was updated at least quarterly. The licensee had not conducted drills or other specific training to confirm individual performance and to verify the overall function of the manual call-out system for at least the last three years. The inspectors concluded that staffing and activation of ERFs using the manual process would not have been timely. As indicated by REP Table 2-2A, "timely" staffing and activation of an ERF means within about 60 minutes of the emergency declaration warranting such activation. A drill conducted during off-hours on October 10, 1996 was marginally successful in that it indicated staffing times of about one hour could have been achieved. However, this occurred only after written and oral instruction, procedure distribution, and announcement of the drill to affected persons. Since no actual travel to the plant was involved, this drill did not constitute a highly accurate measure of the actual time required to staff and activate the ERFs.

c. Conclusions

The inspection determined that the licensee failed to adequately maintain both the automated system for ERO call-out (from about July 22 to October 3, 1996) and the manual backup system over an indeterminate period (at least the last several years). The concurrent deficiencies in the automated and manual systems for ERO call-out represented a failure by the licensee, during the period July 22-October 3, 1996, to

maintain the capability to execute the provisions of the REP and its implementing procedures in a timely manner with respect to augmentation of the ERO during off-hours. This failure to comply with the requirement of 10 CFR 50.54(q) that nuclear power plant licensees follow and maintain in effect emergency plans which meet the planning standards of 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50 is identified as Escalated Enforcement Item (EEI) 50-335, 50-389/96-18-01: ERO augmentation scheme not maintained adequately.

P3 EP Procedures and Documentation

P3.1 Radiological Emergency Plan

a. Inspection Scope (82701)

The inspectors selectively reviewed changes made to the REP since the NRC's previous program inspection of this area (conducted in February 1995) to determine whether any of these changes had decreased the effectiveness of the REP.

b. Observations and Findings

Since February 1995, the licensee had issued four revisions to the REP (Revisions 28-31). Revision 30 (dated July 31, 1996) and Revision 31 (dated September 13, 1996) were selectively reviewed and discussed with licensee personnel, since those revisions had not been formally evaluated through the NRC's license review process.

Revision 30 primarily promulgated the modifications associated with the transfer of the Nuclear Division staff from the corporate office to the St. Lucie and Turkey Point sites. With respect to the EP program, this entailed the transfer of program management and oversight responsibilities from the Manager, Nuclear Emergency Preparedness (in the corporate office) to the Site Services Manager (a position later renamed Services Manager, and which reports directly to the Site Vice President), and the addition of a third Emergency Planning Coordinator to the St. Lucie EP staff. In addition, the Off-site Emergency Response Organization (which provided personnel for the EOF) became the Expanded Emergency Response Organization. The inspectors evaluated these changes in detail and discussed them with cognizant licensee representatives, including the former Manager, Nuclear Emergency Preparedness, the Services Manager, and a Quality Assurance (QA) Senior Analyst. The inspectors determined that strong EP program oversight would be required from the Services Manager to preclude further degradation of the effectiveness of the licensee's EP program and to implement appropriate corrective actions for the findings of this inspection, and that such a level of oversight is defined and required by provisions of both the REP and procedure QI 1-PR/PSL-1, "Site Organization", Revision 30, dated September 1996.

The changes made in Revision 31 were primarily concerned with the licensee's efforts to standardize the REPs for its two nuclear plants.

The inspectors ascertained that the licensee had recently made changes to the Technical Specifications (TS) for the St. Lucie Plant which included implications for the REP, as well as the Security Plan. Amendment Nos. 147 and 86 to the operating licenses for Unit 1 and 2, respectively, were approved by the NRC on August 20, 1996, and consisted of changes to the TS in response to the licensee's application dated August 16, 1995. Among numerous changes in these amendments were the deletion (for both Unit 1 and 2) of the previous TS 6.8.1.d and TS 6.8.1.e, which formerly specified that "Written procedures shall be established, implemented and maintained" to cover "Security Plan implementation" and "Emergency Plan implementation", respectively. These changes were proposed by the licensee in response to NRC Generic Letter (GL) 93-07, dated December 28, 1993, which authorized licensees to propose modifications to certain TS administrative control requirements for emergency and security plans. In Attachment 2, "Safety Analysis", to the August 15, 1995 application, the licensee stated (in the introduction to the section addressing modifications to TS 6.5.1.6.i, 6.5.1.6.j, 6.8.1.d, and 6.8.1.e) that the "selected Technical Specifications are being relocated to the Emergency Plan or Security Plan as appropriate. Relocating these requirements to the appropriate plan will ensure the control of future changes are under the requirements of 10 CFR 50.54, 10 CFR 73.55 and 10 CFR 73.56." The NRC's referenced approval stated that the "licensee proposes to relocate these review requirements and their implementing procedures to the St. Lucie Security and Emergency Plans..." The licensee's application did not specifically state that TS 6.8.1.d and 6.8.1.e would be deleted without relocation to the Security Plan and Emergency Plan, as applicable, nor did it provide a justification for such an approach, which would be explicitly contrary to the detailed guidance on page 2 of Enclosure 2 to GL 93-07. As of the end date of the current inspection, the licensee had not relocated the requirements formerly found in TS 6.8.1.d and 6.8.1.e to the Security Plan or Emergency Plan, as applicable. Condition Report (CR) No. 96-2611 was written to identify the discrepancy discussed here with respect to the REP, but corrective action was not expected to be completed until issuance of the next REP revision near the end of 1996.

c. Conclusions

The inspectors concluded that the changes in REP Revision 30 associated with the licensee's August 1996 reorganization and the changes in Revision 31 did not decrease the effectiveness of the REP. The licensee's failure to relocate the requirements formerly found in TS 6.8.1.d and 6.8.1.e to the Security Plan or Emergency Plan, as applicable, in accordance with a written licensee commitment, is identified as an apparent deviation (EEI 50-335, 50-389/96-18-02): Deleted TS not relocated to Security Plan and REP.

P3.2 Emergency Plan Implementing Procedures

a. Inspection Scope (82701)

The inspectors reviewed the licensee's administration of selected REP requirements through evaluation of the adequacy of the implementing details contained in the EIPs.

b. Observations and Findings

In accordance with regulatory requirements and guidance, the licensee developed criteria to be used to determine when, following an accident, reentry and recovery action could be initiated. As guidance for developing and conducting recovery operations, the licensee developed a document entitled, "Florida Power & Light Company Nuclear Power Plant Recovery Plan" (Recovery Plan). This document was not controlled as part of the REP or EIPs, though it was clearly an adjunct to the REP and interdependent with the EIPs. There appeared to be no administrative guidance that controlled the development, distribution, and periodic review of the Recovery Plan. The licensee had established, and followed, periodic review requirements for the Emergency Plan and EIPs. The Recovery Plan was not subject to such reviews, and was last revised on May 31, 1993.

Section IV.A, "Organization", of Appendix E to 10 CFR Part 50, concerning the content of the licensee's emergency plan, states the following: "The organization for coping with radiological emergencies shall be described, including definition of authorities, responsibilities, and duties of individuals assigned to the licensee's emergency organization and the means for notification of such individuals in the event of an emergency". In Section 2.2 of the REP, a basic description of the normal and emergency response organization was provided. Some additional details of the ERO structure were provided in EIP 3100023E, "On-site Emergency Organization and Call Directory". This procedure generally addressed the personnel who respond to the site in an emergency. A review of EIP 3100023E compared to the autodialer database disclosed that 21 of the positions identified in the autodialer database were not included in the EIP 3100023E. A document entitled "St. Lucie Plant Emergency Response Directory" provided more details of the licensee's ERO structure. This directory generally addressed the personnel who would respond to offsite facilities, such as the EOF, in an emergency. This directory was not controlled as part of the REP and EIPs, though it was clearly an adjunct to the Emergency Plan, and interdependent with the EIPs. The only available listing of the licensee's complete ERO was through the autodialer database. Neither the REP nor its associated implementing procedures provided a clear or complete description of the licensee's organization for coping with emergencies. The same was true for the means used by the licensee to notify individuals in an emergency. No documents, other than the autodialer database, were available which clearly described the means for notification of all ERO personnel.

Section 2.4.4 of the REP stated, "In the event that the OSC becomes untenable, the Emergency Coordinator will designate an alternate location." The procedure expected to provide implementing details relative to this direction was EIP 3100032E, "On-Site Support Centers", Revision 17, approved February 5, 1996. The only applicable implementing information in this procedure was contained in Step 8.7 of the "Instructions" section, which consisted of the following statement: "In the event that the OSC becomes untenable, the Emergency Coordinator shall designate an alternate location." As stated in Section 1.3 of the REP, the REP itself "provides a conceptual basis for the development of the detailed procedures necessary to implement the plan." In repeating the "conceptual basis" found in the REP, EIP 3100032E was

inadequate with respect to the provision of appropriate guidance for the Emergency Coordinator and other ERO personnel regarding suitable alternate locations for the OSC and actions that may be necessary to effect the transfer of OSC functions to that alternate location.

c. Conclusions

Several inadequacies and discrepancies were identified with respect to the implementing details provided in the EIPs. The inspectors concluded that the EIPs did not adequately implement the requirements of the REP in the following respects: (1) recovery activities, discussed conceptually in REP Section 5.4, were not adequately addressed in EIPs; (2) the EIPs did not adequately describe and delineate the licensee's ERO and the detailed means for notifying ERO members in an emergency; and (3) REP Section 2.4.4, addressing OSC relocation, was not adequately implemented by the EIPs. Prior to August 20, 1996, the licensee's TS 6.B.1.e specified that "Written procedures shall be established, implemented and maintained covering ... Emergency Plan implementation." The examples of inadequate EIPs listed above were present in the same status prior to August 20, 1996, as when identified during the inspection. These multiple examples of failure to establish and maintain adequate procedures to implement the REP are identified as EEI 50-335, 50-389/96-18-03: Inadequacies in certain Emergency Plan Implementing Procedures.

P5 **Staff Training and Qualification in EP**

The inspectors conducted a review of the licensee's ERO training program compared to regulatory requirements. The following sections identify the specific areas reviewed and the results of those reviews. Three examples of apparent violations of REP requirements in the training program are discussed in Sections P5.1, P5.3, and P5.4, and are collectively identified as EEI 50-335, 50-389/96-18-04: Training program not adequately implemented.

P5.1 Initial Training and Annual Retraining of Emergency Response Organization Personnel

a. Inspection Scope (82701)

In order to determine the state of the licensee's training program for emergency response personnel, the inspectors reviewed the records documenting completion of required training for the years 1994 and 1995.

b. Observations and Findings

REP Section 7.2.2, "Training of On-Site Emergency Response Organization Personnel", stated, "For employees with specific assignments or authorities as members of emergency teams, initial training and annual retraining programs will be provided. Training must be current to be maintained on the site Emergency Team Roster." The licensee's ERO training program was described in detail in EPIP 3100034E, "Maintaining Emergency Preparedness - Emergency Response Plan

Training." In Section 8.0, "Instructions", of EPIP 3100034E, some emergency response positions and the annual training required for those positions were described.

A review of the licensee's training records for the year 1994 disclosed that not all of the positions identified in the ERO were included in the annual retraining program. Specifically, the following 17 positions were not included in the 1994 retraining program: OSC Electrical Reentry Supervisor, OSC Instrumentation and Controls Reentry Supervisor, OSC Mechanical Reentry Supervisor, OSC Electrical Chief, OSC Supervisor, OSC Coordinator with TSC, Rotating Maintenance Shift Supervisor, Electricians, Mechanics, Instrumentation and Controls Technicians, OSC Operations Support Testing Staff, Dosimetry Technicians, Paramedic, Mechanical Foreman, OSC Nuclear Material Management Staff, OSC Fire Protection, and OSC Administrative Technician/Log Keeper. Approximately 92 individuals who were included in the ERO with specific assignments were not retrained in the year 1994.

In early February 1995, the licensee conducted a REP self-assessment, as a result of which the licensee determined that some members of the ERO were not properly requalified in 1994. The licensee took action to correct the deficiencies that were identified. The licensee also initiated programmatic corrective action to ensure that training requirements were properly maintained. Corrective actions were documented in St. Lucie Action Request (STAR) 950157, which was closed on May 5, 1995. (The STAR program was the predecessor to the current system.) The February 1995 self-assessment did not identify the broader problem of the training program's failure to include all ERO personnel; it was primarily focused on the delinquent qualifications of those identified in the existing training program.

The licensee's critique of the September 1994 accountability drill included a suggested corrective action item to "Clarify training requirements for all TSC and OSC emergency response positions in conjunction with the annual review of the Emergency Plan and Emergency Plan Implementing Procedures." On March 22, 1995, the licensee revised EPIP 3100034E to add several more of the positions identified in the ERO to those described in the procedure. A review of the licensee's training records for the year 1995 revealed that not all of the positions identified in the emergency response organization were included in the annual retraining program. Specifically, the following eight positions were not included in the 1995 retraining program: OSC Electrical Chief, OSC Coordinator with TSC, Electricians, Mechanics, Instrumentation and Controls Technicians, Dosimetry Technicians, Paramedic, and Mechanical Foreman. Approximately 54 individuals who were included on the ERO with specific assignments were not retrained in the year 1995. Through discussions with cognizant licensee personnel, the inspectors determined that for those positions which did not receive annual retraining, as specified above, there was also no specific initial training provided. Existing records also showed that no training was provided for these positions.

During the course of this inspection the licensee was conducting special training sessions intended to cover all personnel assigned to the ERO. The inspectors visited three of the training sessions. This training was being provided because of recent

Enclosure

major changes in the ERO as a result of reassignment of many functions, responsibilities, and personnel from the licensee's corporate organization to the site. This training was not part of the established training program. Through discussion with cognizant licensee personnel the inspectors learned that the licensee was in the process of evaluating the currently established emergency preparedness training program to identify areas that may need improvement.

c. Conclusion

The licensee failed to provide specific initial training or annual retraining for 17 positions (approximately 92 individuals) in 1994 and for 8 positions (approximately 54 individuals) in 1995. This is Example 1 of an apparent violation of the training requirements found in Section 7 of the REP.

P5.2 Exercise and Practice Drills

a. Inspection Scope (82701)

In order to determine the state of the licensee's training program for emergency response personnel, the inspectors interviewed selected individuals assigned to various ERO positions. The inspectors also reviewed sign-in sheets for exercises conducted in 1994, 1995, and 1996.

b. Observations and Findings

REP Section 7.2.2, "Training of On-Site Emergency Response Organization Personnel", states: "The training program for members of the on-site emergency response organization will include practical drills as appropriate and participation in exercises, in which each individual demonstrates an ability to perform assigned emergency functions." The licensee's REP training program was described in detail in EPIP 3100034E. This procedure made no mention of the participation of individuals in drills or exercises as part of the training program. No arrangements were provided to ensure that each individual participated in drills or exercises, either during initial qualification or periodically thereafter.

Through interviews with cognizant licensee personnel, the inspectors learned that frequently the same individuals participated, in the same positions, from year to year, in both the annual exercise and practice drill(s) associated with the annual exercise. This practice excluded other individuals qualified for those positions from participation in drills. A review of selected names from exercise sign-in sheets for the years 1994, 1995, and 1996 indicated that the same individuals did often participate in the exercise while others did not. The sign-in sheets also indicated that these individuals tended to be responding to fill the same position each year. However, the sign-in sheet documentation was not sufficiently detailed to verify this in each of the instances that were reviewed.

c. Conclusion

The licensee had not provided a programmatic method to ensure that each individual, through participation in a drill or exercise, demonstrated an ability to perform assigned emergency functions. Pending receipt and evaluation of additional information from the licensee (see Section X3), this matter is identified as Unresolved Item (URI) 50-335, 50-389/96-18-05: ERO personnel not qualified through drill/exercise participation.

P5.3 Training of Emergency Response Organization Personnel on Emergency Plan Implementing Procedures

a. Inspection Scope (82701)

In order to determine the state of the licensee's training program for emergency response personnel, the inspectors reviewed the licensee's training records documenting completion of required training for 1994 and 1995.

b. Observations and Findings

REP Section 7.2.1, "Objectives", stated the following: "The primary objectives of emergency response training are as follows: 1. Familiarize appropriate individuals with Emergency Plan and related implementing procedures. 2. Instruct individuals in their specific duties to ensure effective and expeditious action during an emergency. 3. Periodically present significant changes in the scope or content of the Emergency Plan. 4. Provide refresher training to ensure that personnel are familiar with their duties and responsibilities."

The licensee's REP training program was described in detail in EPIP 3100034E. In Section 8.0, "Instructions", some emergency response positions and the annual training required for those positions were described. For most of the listed emergency response positions, individuals were to receive "Emergency Plan familiarization through review of selected Emergency Plan Implementing Procedures (EPIP)."

The annual REP training packages used in 1994 and 1995 to accomplish required training were reviewed. For both years only the five following EPIPs were identified as needing to be reviewed: EPIP 3100021E, "Duties and Responsibilities of the Emergency Coordinator"; EPIP 3100022E, "Classification of Emergencies"; EPIP 3100023E, "On-site Emergency Organization and Call Directory"; EPIP 3100032E, "On-site Support Centers"; and EPIP 3100033E, "Off-site Dose Calculations".

As discussed in Section P5.1 above, not all personnel on the ERO received training as was required. For those individuals who did receive training, the training consisted of an assignment to read only the previously listed five EPIPs. A review of assigned responsibilities and instructions in several selected EPIPs compared to the five EPIPs included in the annual training package revealed that many personnel were not receiving specific training on several of the procedures that they would be required to

implement in performing their assigned emergency response duties. The following EIPs, and associated ERO positions that would implement the EIP, are specific examples:

- ▶ EIP 3100027E, "Re-entry" - Emergency Coordinator, Radiation Team Leader, OSC Supervisor, Re-entry Team Supervisor, Re-entry Team Member, OSC Status Board Keeper, and OSC Dose Recorder.
- ▶ EIP 3100026E, "Criteria for and Conduct of Evacuation" - Emergency Coordinator, Assembly Area Supervisor, and TSC Security Supervisor.
- ▶ EIP 3100035E, "Off-site Radiation Monitoring" - Radiation Team Leader and TSC Supervisor.

In addition to not receiving initial or annual retraining on all applicable procedures for a specific position, personnel were not informed of significant changes that were made to procedures. For example, EIP 3100026E was revised significantly in September 1994, and again in February 1995. No documentation was available to indicate that affected ERO personnel were informed of the changes made to the procedure.

c. Conclusion

The licensee's training program failed to include initial training and annual retraining on all procedures required to be implemented by ERO personnel in several identified positions. The licensee also failed to ensure that ERO personnel in several identified positions were informed of relevant changes in EIPs. This is Example 2 of an apparent violation of the training requirements found in Section 7 of the REP.

P5.4 Maintenance and Control of Emergency Response Organization Qualifications

a. Inspection Scope (82701)

In order to determine the state of the licensee's training program for emergency response personnel, the inspectors reviewed the licensee's training records documenting completion of required training for 1994 and 1995. The inspectors also reviewed a copy of the Scenario Roster Listing Duty Roster (autodialer database), dated October 9, 1996; the Radiation Exposure Monitoring & Access Control System (REMACS) Exposure Summary Report, dated October 11, 1996; and the Emergency Team Roster, dated October 2, 1996.

b. Observations and Findings

REP Section 7.2.2, "Training of On-Site Emergency Response Organization Personnel", states in part, "For employees with specific assignments or authorities as members of emergency teams, initial training and annual retraining programs will be provided. Training must be current to be maintained on the site Emergency Team Roster." The ERO training program was described in detail in EIP 3100034E. Section 5.4.3 stated that the Protection Services Supervisor was responsible for:

"Removing individuals who fail to maintain training qualifications for EPIP 3100023E, "On-site Emergency Organization and Call Directory" and the FPL Emergency Recall System (autodialer) database when notified by the appropriate department head or the Training Department." In EPIP 3100034E, Section 5.7 stated: "Department heads responsible for personnel filling the following positions shall ensure that these persons are currently Radiation Control Area Training (RCAT) and respirator qualified: (151) OSC HP Tech, ..., (161) OSC Electrician..."

A review of the licensee's training records for the year 1994 revealed that two individuals filling the position of TSC Security Supervisor did not complete annual retraining in 1994. These two individuals remained on the On-site Emergency Organization and Call Directory for the year 1995 without having completed retraining as needed.

In early February 1995, the licensee conducted an EP self-assessment. This self-assessment identified that no documentation could be found for the qualifications of the two individuals filling the position of TSC Security Supervisor. The licensee initiated programmatic corrective action to ensure that training requirements were properly maintained. The licensee's corrective actions were documented in STAR 950157 which was closed on May 5, 1995.

The Emergency Preparedness Functional Area Audit conducted between March 27, 1996 and August 14, 1996, Audit No. QAS-EMP-96-1, found that one individual filling an OSC position as a Mechanical Reentry Supervisor had not completed the annual requalification training as required. The administrative systems failed to remove this individual from the ERO upon expiration of training requirements. Corrective actions implemented by STAR 950157 were not successful in preventing recurrence of the deficiency.

The Emergency Team Roster, dated October 2, 1996, issued by the Training Department identified several individuals as not having current respirator qualifications. A review of the autodialer database, dated October 9, 1996, compared to the REMACS Exposure Summary Report, dated October 11, 1996, revealed that four individuals listed as (151) OSC HP Tech and two individuals listed as (161) OSC Electrician were not respirator-qualified as they were required to be for their respective positions. The four individuals listed as OSC HP Tech were identified in the October 2, 1996, Emergency Team Roster as not having current respirator qualification. The two individuals listed as OSC Electrician were not identified in the October 2, 1996, Emergency Team Roster. Again the licensee's administrative systems failed to remove these individuals from the ERO upon expiration of training requirements.

c. Conclusion

For the calendar year 1995, the licensee failed to remove two individuals from the emergency response organization who had not completed retraining as required, and whose qualifications had expired in 1994. The licensee also failed to remove six individuals from the emergency team roster effective October 6, 1996, who had not

remained qualified to fill response team requirements as a result of allowing their respirator qualifications to lapse. The licensee did not have an effective method of systematically ensuring that individuals assigned to the ERO are current in required training and qualifications. This is Example 3 of an apparent violation of the training requirements found in Section 7 of the REP.

P7 Quality Assurance in EP Activities

P7.1 Corrective Action Program

a. Inspection Scope (82701)

The inspectors reviewed the licensee's program for identifying and correcting weaknesses and deficiencies in EP. This review included the evaluation of numerous identified issues and their respective corrective actions in the CR, Plant Manager Action Item (PMAI), and EP Action systems.

b. Observations and Findings

Critique items from a site accountability drill conducted in September 1994 identified problems with the audibility of the site-wide public-address system (Gaitronics), and the need for the addition of an alert tone (alarm). The licensee initiated corrective actions for the addition of a new alarm under STAR 94110314. A request for engineering assistance (REA) 94-068-90 was issued to initiate the appropriate action to result in installation of the new alarm. For unidentified reasons the REA was never completely processed, the item was not budgeted, and no actions were implemented. In early 1996, STAR 94110314 was closed and transferred to PM96-03-247 (in the PMAI system) for administrative reasons due to discontinuance of the STAR program. Subsequently, the licensee discovered that REA 94-068-90 had not been implemented. A new REA (REA 96-084) was issued on September 16, 1996 to initiate the necessary actions to resolve the issue and result in the installation of the new alarm. This item has been budgeted by Maintenance for 1997.

The licensee initiated corrective actions to verify the audibility of the Gaitronics system under STAR 94110315. The licensee identified that this issue was similar to a previously addressed issue identified in NRC Bulletin 79-18, concerning the audibility of alarms in high-noise areas. The licensee had responded to the NRC on September 21, 1979, indicating that the site was then in compliance with Bulletin 79-18. In early 1996, STAR 94110315 was closed and transferred to PM96-02-423 for administrative reasons (i.e., discontinuance of the STAR program). As of November 1, 1996, the licensee had not completed action to resolve the issue of audibility of the Gaitronics system throughout the site.

In February 1995, an NRC inspection identified apparent performance problems with respect to the 15-minute requirement for notification of the State of Florida following an emergency declaration (see Paragraph 5 of NRC Inspection Report Nos. 50-335/95-03 and 50-389/95-03). As documented in that report, the inspector observed two drills conducted in the Control Room simulator as part of the Licensed

Operator Requalification (LOR) Training Program. The time periods required to begin the State notifications were 27 and 26 minutes, well beyond the 15-minute criterion. The report documented the licensee's initiation of STAR 950172 to track appropriate follow-up and corrective actions for this issue. Although the STAR was subsequently closed after modifications to EPIP 3100021E and the training in this area, problems with notifications continued to be raised by licensee personnel during LOR training. The issue was formally identified again in CR 96-1465, which was initiated by a member of the Operations staff on June 19, 1996. The inspector's review of this issue determined that the licensee's past practice of conducting most drills and exercises during normal working hours had precluded identification of a problem with Control Room staffing. Under such conditions, it was legitimate for an "extra" Nuclear Plant Supervisor (NPS) to appear in the Control Room immediately after the drill or exercise commenced to assume a position called NPS Communicator. This extra NPS was not typically onsite during off-hours, and would not be readily available to serve as NPS Communicator. During the current inspection, the licensee decided to train a pool of knowledgeable personnel in the Rotating Maintenance Shift Supervisor position to serve as offsite communicator following an emergency declaration. Although it appeared that this approach was likely to be successful, it represented an instance of untimely root-cause identification and ineffective management oversight of EP problem resolution.

In late July and early August 1995, the St. Lucie site and adjacent areas were affected by Hurricane Erin. As a result of the hurricane, the licensee declared a Notification of Unusual Event in accordance with established procedures. Subsequent to the event, the licensee developed a draft critique of the site's response to Hurricane Erin. A total of 50 recommendations for corrective actions were identified in the draft critique. Some examples of these corrective actions included the following: identifying hurricane-safe structures onsite and a plan for positioning personnel in those structures; designating an onsite individual to monitor the hurricane path; and establishing a consistent staffing policy. This draft critique was never finalized and issued by licensee management to assure that corrective actions were taken following the event. Hurricane Bertha threatened the St. Lucie site in early July 1996, after which the licensee again prepared a critique of its response actions. A total of 17 recommendations for corrective actions were identified in the draft critique for Hurricane Bertha. On August 23, 1996, the draft critiques for Hurricane Erin and Bertha were communicated by memorandum to the Vice President - St. Lucie Plant. As of November 1, 1996, the licensee had initiated corrective actions for some of the issues identified in the critiques. Licensee management acknowledged that necessary corrective actions deriving from the Hurricane Erin critique should reasonably have been completed by June 1, 1996, which was the beginning of the 1996 hurricane season.

c. Conclusions

The inspectors concluded that licensee management failed to ensure the implementation of timely corrective actions for certain emergency preparedness deficiencies and weaknesses. The significant examples identified were: (a) failure to address concerns in a timely manner regarding the audibility of the Gaitronics (or

plant public-address system) formally identified in late 1994; (b) failure to provide timely corrective action to address a questionable capability for notification of the State of Florida within 15 minutes of an emergency declaration; and (c) failure to implement timely corrective actions for deficiencies and recommendations identified by the critique of the Hurricane Erin response in August 1995. These issues are collectively identified as an EP Program Weakness, and will be tracked as Inspection Follow-up Item (IFI) 50-335, 50-389/95-18-06. Untimely corrective actions for some EP deficiencies.

P7.2 Audits

a. Inspection Scope (82701)

An independent audit of the emergency preparedness program was required to be performed at least annually by REP Section 7.3.4 and 10 CFR 50.54(t). The following audit reports were reviewed and discussed with licensee representatives:

- ▶ Quality Assurance Audit Report QSL-OPS-94-06, dated June 6, 1994
- ▶ Quality Assurance Audit Report QSL-OPS-95-07, dated June 16, 1995
- ▶ Quality Assurance Audit Report QAS-EMP-96-1, dated August 16, 1996

b. Observations and Findings

The audits were conducted annually as required and addressed applicable emergency preparedness program areas. The audits focused on verification of compliance with NRC requirements and the REP. The inspectors reviewed audit checklists and found them adequate. No significant findings were disclosed by the 1994 and 1995 QA audits. The 1996 audit identified three findings, all of which were similar to the violations or weaknesses documented in this report. The report summary stated that "The findings in this audit indicate a decline in St. Lucie readiness and Emergency Preparedness program effectiveness."

From discussions with licensee personnel and review of applicable documentation, the inspectors determined that the auditors had appropriate training and qualifications to perform EP audits.

c. Conclusions

The audit program met required frequencies, and the audits were adequate and performed in accordance with regulatory requirements.

MANAGEMENT MEETINGS

X1 Public Exit Meeting Summary

The inspectors presented the inspection results (substantially as delineated in the Executive Summary) to members of the licensee management and the public at the conclusion of the inspection on November 1, 1996. The licensee acknowledged the findings without dissenting comments.

X3 Follow-up Management Meetings via Teleconference

On November 14, 1996, a follow-up teleconference between Mr. J. Scarola, Plant Manager, and Mr. E. Merschoff, Director, Division of Reactor Projects, NRC Region II, was conducted to discuss the issue regarding qualification of ERO personnel through drill and/or exercise participation (Paragraph P5.2). The licensee committed to provide additional written information relative to this matter by November 20, but this date was later changed to November 25, 1996 at the licensee's request. The subject information was not factored into this report.

On November 25, 1996, a follow-up teleconference between Mr. A. Stall, Vice President - St. Lucie Plant, and Mr. K. Barr, Chief, Plant Support Branch, NRC Region II, provided licensee management with the final categorization of inspection findings as delineated in the Executive Summary of this report. The most significant change from the findings as presented during the exit meeting of November 1 was the addition of an apparent deviation.

On November 26, 1996, a follow-up teleconference between Mr. A. Stall, Vice President - St. Lucie Plant, and Mr. K. Barr, Chief, Plant Support Branch, NRC Region II, informed licensee management that an issue previously identified as an Unresolved Item had been categorized as an apparent violation (Section P3.2 of inspection report).

PARTIAL LIST OF PERSONS CONTACTED

M. Allen, Training Manager
G. Casto, Emergency Preparedness Supervisor
R. Dawson, Protection Services Supervisor
D. Fadden, Services Manager
D. Mothena, Manager, Plant Services (Corporate)
J. Scarola, Plant General Manager
A. Stall, Vice President - St. Lucie Plant
E. Weinkam, Licensing Manager

INSPECTION PROCEDURES

IP 82701: Operational Status of the Emergency Preparedness Program

ITEMS OPENED, CLOSED, AND DISCUSSEDOpened

50-335, 50-389/96-18-01	EEI	ERO augmentation scheme not maintained adequately (Section P2.1)
50-335, 50-389/96-18-02	EEI	Deleted TS not relocated to Security Plan and REP (Section P3.1)
50-335, 50-389/96-18-03	EEI	Inadequacies in certain Emergency Plan Implementing Procedures (Section P3.2)
50-335, 50-389/96-18-04	EEI	Training program not adequately implemented (Section P5)
50-335, 50-389/96-18-05	URI	ERO personnel not qualified through drill/exercise participation (Section P5.2)
50-335, 50-389/96-18-06	IFI	Untimely corrective actions for some EP deficiencies (Section P7.1)

LIST OF ABBREVIATIONS USED

CFR	Code of Federal Regulations
CR	Condition Report
DCS	Duty Call Supervisor
EEI	Escalated Enforcement Item
EOF	Emergency Operations Facility
EP	Emergency Preparedness
EPIP	Emergency Plan Implementing Procedure
ERF	Emergency Response Facility
ERO	Emergency Response Organization
FPL	Florida Power and Light Company
GL	Generic Letter
IFI	Inspection Follow-up Item
LOR	Licensed Operator Requalification
NPS	Nuclear Plant Supervisor
NRC	Nuclear Regulatory Commission
OSC	Operational Support Center
PMAI	Plant Manager Action Item
QA	Quality Assurance
RCAT	Radiation Control Area Training
REA	Request for Engineering Assistance
REMACS	Radiation Exposure Monitoring & Access Control System
REP	Radiological Emergency Plan
STAR	St. Lucie Action Request
TS	Technical Specification
TSC	Technical Support Center
URI	Unresolved Item

November 26, 1996

EA 96-457

Florida Power & Light Company
ATTN: T. F. Plunkett
President - Nuclear Division
P. O. Box 14000
Juno Beach, Florida 33408-0420

SUBJECT: NRC SPECIAL INSPECTION REPORT 50-335/96-22, 50-389/96-22

Dear Mr. Plunkett:

On October 18, 1996, the NRC completed a special inspection of engineering activities at your St. Lucie 1 and 2 facilities. A final exit briefing was held via telephone with members of your staff on November 25, 1996, to clarify the apparent violations identified during the inspection. The enclosed report presents the results of that inspection. Areas examined during the inspection are identified in the report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, plant drawings, and engineering evaluations.

Based on the results of this inspection, three apparent violations were identified and are being considered for escalated enforcement action in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600.

The first apparent violation involved the failure to establish design control measures in accordance with 10 CFR 50, Appendix B, Criterion III. Specifically, a failure to translate design requirements into drawings and a failure to provide independent review for identification of this error resulted in miswiring of excore nuclear instrumentation. Similarly, a failure to compensate for a physical shift in the reactor core midplane in the software used for calibration of incore nuclear instrumentation and a failure to provide independent review for identification of this error resulted in improperly calibrated, safety related instrumentation being placed in service.

The second apparent violation involved your failure to verify and validate properly the software used for calibration of incore nuclear instrumentation as required by plant procedures. Specifically, results produced by new BEACON software were not compared with results from the functionally equivalent and previously validated IMPAX software. This comparison might have identified the design error concerning core midplane offset.

9612170280 GPR

The third apparent violation involved the failure of your plant staff to prepare a Condition Report as required by plant procedures when markings for electrical terminal connectors on a replacement excore neutron detector were found to be different from existing cable markings. The wires were connected incorrectly, and the miswired detector was placed in service before the error was identified. A Condition Report on the marking error would have provided an independent review of this discrepancy and might have prevented the installation error.

With regard to the first two apparent violations, we are concerned about the failure of your design control process and about the potential impact of this failure implies on other design products. We are also concerned that the miswiring and calibration errors were not identified earlier based upon questions raised by control room operators. With regard to the third violation, we are concerned that a Condition Report was not written when the marking discrepancy was discovered and about the potential impact on quality if Condition Reports have not been written as required for other discrepant conditions.

A predecisional enforcement conference to discuss these apparent violations has been scheduled for December 10, 1996. The decision to hold a predecisional enforcement conference does not mean that the NRC has determined that a violation has occurred or that enforcement action will be taken. This conference is being held to obtain information to enable the NRC to make an enforcement decision, such as a common understanding of the facts, root causes, missed opportunities to identify the apparent violations sooner, corrective actions, significance of the issues and the need for lasting and effective corrective actions. In addition, this is an opportunity for you to point out any errors in our inspection report and for you to provide any information concerning your perspectives on 1) the severity of the violations, 2) the application of the factors that the NRC considers when it determines the amount of a civil penalty that may be assessed in accordance with Section VI.B.2 of the Enforcement Policy, and 3) any other application of the Enforcement Policy to this case, including the exercise of discretion in accordance with Section VII.

You will be advised by separate correspondence of the results of our deliberations on this matter. No response regarding these apparent violations is required at this time.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room (PDR).

Sincerely,

ORIGINAL SIGNED BY
ALBERT F. GIBSON FOR

Albert F. Gibson, Director
Division of Reactor Safety

Docket Nos. 50-335, 50-389
License Nos. DPR-67, NPF-16

Enclosure: Inspection Report 50-335/96-22, 50-389/96-22

cc w/encl:

J. A. Stall
Site Vice President
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0128

H. N. Paduano, Manager
Licensing and Special Programs
Florida Power and Light Company
P. O. Box 14000
Juno Beach, FL 33408-0420

J. Scarola
Plant General Manager
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0128

E. J. Weinkam
Plant Licensing Manager
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0218

(cc w/encl cont'd - See page 4)

(cc w/encl cont'd)
J. R. Newman, Esq.
Morgan, Lewis & Bockius
1800 M Street, NW
Washington, D. C. 20036

John T. Butler, Esq.
Steel, Hector and Davis
4000 Southeast Financial Center
Miami, FL 33131-2398

Bill Passetti
Office of Radiation Control
Department of Health and
Rehabilitative Services
1317 Winewood Boulevard
Tallahassee, FL 32399-0700

Jack Shreve, Public Counsel
Office of the Public Counsel
c/o The Florida Legislature
111 West Madison Avenue, Room 812
Tallahassee, FL 32399-1400

Joe Myers, Director
Division of Emergency Preparedness
Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399-2100

Thomas R. L. Kindred
County Administrator
St. Lucie County
2300 Virginia Avenue
Ft. Pierce, FL 34982

(cc w/encl cont'd - See page 5)

(cc w/encl cont'd)
 Charles B. Brinkman
 Washington Nuclear Operations
 ABB Combustion Engineering, Inc.
 12300 Twinbrook Parkway, Suite 3300
 Rockville, MD 20852

Distribution w/encl:

J. Lieberman, OE
 B. Summers, OE:EA file (2 LTRHD)
 C. A. Julian, RII
 L. A. Wiens, NRR
 B. R. Crowley, RII
 W. H. Rankin, RII
 S. H. DuBose, RII
 PUBLIC

NRC Resident Inspector
 U.S. Nuclear Regulatory Comm.
 7585 South Highway A1A
 Jensen Beach, FL 34957-2010

*FOR PREVIOUS CONCURRENCE SEE ATTACHED SHEET

OFFICE	RII DRP	RII DRP	RII DRP	RII DRP	RII DRP	RII EICS
SIGNATURE						
NAME	*CCasto	*CRapo	*Miller	*JYork	*CJulian	*Buryc
DATE	12 / / 96	12 / / 96	12 / / 96	12 / / 96	12 / / 96	12 / / 96
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

(cc w/enc. cont'd)

Jack Shreve, Public Counsel
Office of the Public Counsel
c/o The Florida Legislature
111 West Madison Avenue, Room 812
Tallahassee, FL 32399-1400

Joe Myers, Director
Division of Emergency Preparedness
Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399-2100

Thomas R. L. Kindred
County Administrator
St. Lucie County
2300 Virginia Avenue
Ft. Pierce, FL 34982

Charles B. Brinkman
Washington Nuclear Operations
ABB Combustion Engineering, Inc.
12300 Twinbrook Parkway, Suite 3300
Rockville, MD 20852

Distribution w/enc:

J. Lieberman, OE
B. Summers, OE:EA file (2 LTRHD)
C. A. Julian, RII
L. A. Wiens, NRR
B. R. Crowley, RII
W. H. Rankin, RII
S. H. DuBose, RII
PUBLIC

NRC Resident Inspector
U.S. Nuclear Regulatory Comm.
7585 South Highway A1A
Jensen Beach, FL 34957-2010

PC per discussion with M 11/24/96

OFFICE	RII DRP	RII DRP	RII DRP	RII DRP	RII DRP	RII DRP
SIGNATURE	<i>CC</i>	<i>CR</i>	<i>CJ</i>	<i>JP</i>	<i>CJ</i>	<i>JP</i>
NAME	CCasto	CRado	MMiller	JPark	CJulian	JPark
DATE	11 / 20 / 96	11 / 25 / 96	11 / 22 / 96	11 / 25 / 96	11 / 22 / 96	11 / 25 / 96
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

*+ M to Casked
+ M to M
+ E-mail
Not available*

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 50-335, 50-389
License Nos: DPR-67, NPF-16

Report No: 50-335/96-22, 50-389/96-22

Licensee: Florida Power & Light Co.

Facility: St. Lucie Nuclear Plant, Units 1 & 2

Location: 9250 West Flagler Street
Miami, FL 33102

Date: November 26, 1996

Inspectors: J. York, Reactor Inspector
C. Rapp, Reactor Inspector
M. Miller, Senior Resident Inspector

Approved by: C. Casto
Chief, Engineering Branch
Division of Reactor Safety

Enclosure

~~9612170286~~ FPP

EXECUTIVE SUMMARY

St. Lucie Nuclear Plant, Units 1 & 2
NRC Inspection Report 50-335/96-22, 50-389/96-22

This special inspection was conducted to evaluate the modification of the excore Linear Nuclear Instrumentation drawers which resulted in these drawers being cross wired because of design control problems. This condition was also complicated by reversing the leads on a detector that was being replaced during a maintenance activity. While assessing the safety significance of the event, another design control problem and a procedural compliance problem were identified. This inspection resulted in identification of three apparent violations:

- The first apparent violation involved the failure to establish design control measures in accordance with 10 CFR 50, Appendix B, Criterion III. Specifically, a failure to translate design requirements into drawings and a failure to provide independent review for identification of this error resulted in miswiring of excore nuclear instrumentation. Similarly, a failure to compensate for a physical shift in the reactor core midplane in the software used for calibration of incore nuclear instrumentation and a failure to provide independent review for identification of this error resulted in improperly calibrated, safety related instrumentation being placed in service. (paragraphs E1.1.b.1 and E1.1.b.2).
- The second apparent violation involved your failure to verify and validate properly the software used for calibration of incore nuclear instrumentation as required by plant procedures. Specifically, results produced by new BEACON software were not compared with results from the functionally equivalent and previously validated IMPAX software. This comparison might have identified the design error concerning core midplan offset. (paragraph E1.1.b.2).
- The third apparent violation involved the failure of your plant staff to prepare a Condition Report as required by plant procedures when markings for electrical terminal connectors on a replacement excore neutron detector were found to be different from existing cable markings. The wires were connected incorrectly, and the miswired detector was placed in service before the error was identified. A Condition Report on the marking error would have provided an independent review of this discrepancy and might have prevented the installation error. (paragraph M1.1.b).

Report Details

E1 Conduct of Engineering (37550)

E1.1 Design Control of Nuclear Instrumentation Modification

a. Inspection Scope

The inspectors reviewed activities associated with the plant modification used to replace the Linear Nuclear Instrumentation (NI) drawers located in the Unit 1 control room. This modification resulted in NI channels A, B, C, and D being cross wired due to a design error. This review included evaluations of the root causes, prior opportunity and safety significance from a core physics point of view.

b. Observations and Findings

The St. Lucie Unit 1 Nuclear Instrumentation (NI) System is designed to employ a total of 10 detectors, all located external to the reactor vessel, as described below:

Detector Numbers	Detector Types	Channel Purpose	Associated RPS Trips
1, 2, 3, 4	Fission Chamber	Wide Range Logarithmic Detection	High Rate of Change
5, 6, 7, 8	Uncompensated Ion Chamber	Linear Safety Related Detection	<ul style="list-style-type: none">• Variable High Power• Thermal Margin/Low Pressure• Local Power Density
9, 10	Uncompensated Ion Chamber	Linear Non-Safety Detection (control channels)	None

Detectors 5, 6, 7, 8, 9, and 10, above, are designed with 2 axially distinct detectors each, forming single detector assemblies to allow for the detection of power fractions in the upper and lower axial halves of the core. The signals from the upper and lower halves of each of these detectors are summed to form a total power signal from each detector. The upper and lower halves are also combined electronically to develop an Axial Shape Index (ASI) signal consistent with the equation

$$ASI = \frac{(\text{Lower Detector Power} - \text{Upper Detector Power})}{(\text{Lower Detector Power} + \text{Upper Detector Power})}$$

ASI is used in the control of axial core power distribution by operators and to provide inputs to Thermal Margin/Low Pressure (TM/LP) and Local Power Density (LPD) Reactor Protection System (RPS) trips. Each of the 4 linear safety related detectors

feeds an individual RPS channel, and the RPS trips the reactor on a 2-out-of-4 coincidence for a given trip (e.g. TM/LP).

The purposes of the TM/LP trip are to prevent exceeding Departure from Nucleate Boiling (DNB) limits and to provide a low pressure reactor trip in the event of a loss of coolant accident. The trip setpoint itself is designed to be a reactor coolant system (RCS) pressure limit, set at the higher of 1750 psia or a pressure setpoint calculated by the core protection calculator based upon RCS temperature conditions, reactor power, and power distribution (expressed by the ASI signals generated by detectors 5, 6, 7, and 8). The TM/LP trip is required per Technical Specifications (TS) Table 2.2-1, with setpoints adjusted to agree with Figures 2.2-3 and 2.2-4 of TS. TS Table 3.3-1 requires that at least 3 operable RPS channels provide this trip function at or above 1% thermal power.

The purpose of the LPD trip is to prevent peak local power density in the fuel from exceeding 21 kw/ft, thus assuring that the melting point of the fuel will not be reached during anticipated operational occurrences. The trip is designed to be initiated whenever axial power offset, as indicated by ASI, exceeds either a high or a low calculated setpoint. The LPD trip is required per TS Table 2.2-1, with setpoints adjusted to agree with Figures 2.2-3 and 2.2-4 of TS. TS Table 3.3-1 requires that at least 3 operable RPS channels provide this trip function at or above 15% thermal power.

Each linear NI detector assembly is cylindrical in design, with the two detectors located axially adjacent to one another. The signal cables for each detector assembly (which transmit output from both detectors) exit the assembly from one end of the cylinder. Each detector is installed in a cylindrical housing external to the reactor vessel in positions spaced radially about the vessel to ensure that all quadrants of the core are monitored.

The signal cables for the detectors installed in Unit 1 had been labeled by the vendor as "TOP SIG" and "BOT SIG," indicating output for each detector in the assembly. This labeling scheme assumed that each assembly was installed in its housing oriented such that the signal cables exited the top of the assembly. However, the St. Lucie design is such that the detector assemblies are installed with the signal cabling exiting the assemblies from the bottom, making the "TOP SIG" signal cable correspond to the detector monitoring the bottom half of the core, and vice versa.

During the most recent Unit 1 outage, the licensee elected to replace their existing NI circuitry with a new system developed cooperatively with Gamma-Metrics. The scope of the change included new NI drawers for all four RPS channels and new wide range detectors. During the outage, unrelated to this modification, uncompensated ion chambers (UICs) were replaced in RPS channel B (detector 6) and in the control channel detector 9 location.

On July 30, 1996, St. Lucie Unit 1 was operating at approximately 100 % power when reactor engineering was analyzing the data taken during power ascension and noted an anomaly in the results. The data indicated three of the four excore linear detectors

measured core power moving to the top of the core during power ascension. This was an unexpected phenomena and did not agree with the trend of the power moving to the bottom of the core indicated by RPS Channel B Linear Range Detector, Control Channel #9 Linear Range Detector, and the BEACON Core Power Distribution Monitoring System. Evaluation of the data collected indicated that RPS Channels A, C, and D could have reversed (rolled) leads of the top and bottom chambers input to the RPS drawers.

At 1:00 p.m. the same day, Unit 1 operators were informed of these conditions and immediately declared the A, C, and D channels out-of-service (OOS), which placed the unit in TS 3.0.3 due to 3 of 4 RPS channels for TMLP and LPD being inoperable. The inspector responded to the control room and found that leads were being reversed on the A and C channels in an attempt to restore the channels to operability. Reactor Engineering support was available, with new NI gain values being calculated in support of I&C as the leads for the affected channels were properly aligned. At 1:50 and 2:00 p.m., work was completed on the A and C channels, respectively, and operators drove CEAs into the core to verify proper ASI response. The inspector verified that proper channel response occurred, and the A and C channels were declared operable at 2:00 p.m., leading to an exit from TS 3.0.3.

c. Evaluation of Root Cause

In reviewing the issue, the licensee determined that all four safety related NI channels had been connected to the NI drawers in the RPS cabinets with the upper and lower detector inputs reversed. These field errors resulted from errors in the associated Control Wiring Diagrams (CWDs); that is, the detectors were connected at the NI drawers in conformance with approved engineering drawings. The drawings were prepared and approved with errors in the designation of connection points to the NI drawers. The errant drawings were a part of the Plant Change/Modification (PC/M) package which replaced the NI drawers.

In addition to the wiring errors described above, the licensee determined that NI detectors 6 (associated with RPS channel B) and 9 (one of two control channels) were miswired at the detector ends (in containment), which resulted in RPS NI channel B indicating correctly (as the error at the detector end cancelled out with the error at the NI drawer) and the control channel indicating incorrectly. The miswiring at the detectors was the result of errors made by maintenance personnel during installation.

As a result of the deficiencies described above, the licensee performed a root cause evaluation. The inspectors reviewed the evaluation, discussed the events with the licensee and performed independent reviews of documentation associated with the NI modification. The results of these activities are described below.

The licensee's root cause effort determined that, during the preparation of PC/M 96-009-195, "RPS NI Drawer Replacement," a lack of available vendor information (in the form of approved technical manuals and drawings) forced design personnel to develop drawings based on assumptions generally derived from a similar modification made to Unit 2 during the most recent Unit 2 outage. As a result, CWDs JPN-009-195-002

(providing wiring instructions for RPS channel A), JPN-009-195-004 (providing wiring instructions for RPS channel B), JPN-009-195-006 (providing wiring instructions for RPS channel C), and JPN-009-195-008 (providing wiring instructions for RPS channel D) were modified showing upper and lower detector cable connections at each respective drawer which were in conflict with the internal wiring of the drawers which were to be installed (i.e. field cables for the upper detectors were fed to the drawers' lower inputs and vice versa).

Beyond the assumption of similarity between units, the licensee found that the verification process for the drawings in question contained weaknesses that resulted in a failure to identify the condition. Specifically, the licensee found that the drawings were prepared by a Lead Designer (draftsman) based on inputs from the Lead Engineer (having responsibility for developing the modification package). The drawings were then checked by a second Designer, constituting (essentially) a drafting check. The drawings were then reviewed and approved by the Lead Engineer and approved by the Lead Engineer's Supervisor.

The licensee found that this process differed from the approval process for the modification package, which was independently reviewed by a second engineer. However, the licensee pointed out that the package review did not include a point-to-point wiring check of the affected drawings. The licensee found that the method and sequence of verification described appeared to meet the requirements of Quality Instruction (QI) 1.7, dated July 5, 1995, "Design Input/Verification," but that the method revealed a weakness of the process.

While the subject drawings were approved without having approved vendor technical manuals (VTMs) available to support the review, the licensee had placed a hold on the PC/M completion pending receipt of the vendor documents. Upon receipt, the VTM and other vendor documents were to be incorporated into the PC/M via Change Request Notification (CRN). However, when the documents were received, the licensee stated that they were not reviewed against other package drawings; thus, the wiring designation discrepancy was not identified.

The licensee identified an additional weakness in the amount of time available to verifying engineers. Specifically, the licensee stated:

"The total U1 project man-hours through May 1996 was approximately 1150 man-hours. For scoping and scheduling purposes on a critical complex project, 30% of a projects [sic] total man-hours should be allocated for verification activities. This should have accounted for a few hundred man-hours. The verifying Engineer on the Engineering Package charged a total of 40 man-hours to the project, 15% were on overtime. The verifying Engineer on the CRN charged a total of 6 hours to the project. This relatively small amount of time spent on verification is due to project delays due to supporting unanticipated outages, the number of large projects being worked coincidentally [sic] in PEG I&C...and the available resources..."

The inspectors reviewed these licensee-generated findings for correctness.

The inspector concluded that the licensee's review of the hours spent (or lack thereof) in the review of the subject modification showed thoroughness in the self-assessment process. However, the inspector found that, in focusing on "...the amount of time *available* [emphasis added] to the verifying Engineers to perform verifications..." the licensee failed to identify the larger issue of ensuring that verifications are not curtailed due to scheduler constraints.

The inspectors reviewed CWDs prepared with the PC/M package and found the licensee's conclusions on the reasons for the field miswiring to be correct. The inspectors noted that the licensee's conclusion that the drawings had received an inadequate independent verification was correct; however, the inspectors disagreed with the conclusion that the verification process as performed met the requirements of the applicable Quality Instruction (QI).

The inspectors concluded that the subject QI was of sufficient clarity to ensure an appropriate review. Specifically, the QI, when taken as a whole, required that an engineer (not the designer) perform an independent review of design output documents (e.g. drawings) to ensure agreement with design inputs (in the case of the subject PC/M, the Gamma-Metrics VTM). Contrary to these requirements, the licensee chose to approve the subject CWDs when no approved design input document was available against which the output could be reviewed and allowed the review to be performed without the required level of independence. Further, when the approved design input was available, the licensee failed to perform necessary reviews to ensure agreement between vendor-generated documents and existing licensee-generated drawings.

Specifically, QI 1.7, Revision 1, "Design Input/Verification," included the following:

- Section 5.3 stated that "Design verification is required for...approved design output documents..."
- Section 5.5 stated that "Design verification shall normally be performed by an engineer competent in the discipline/area of expertise, other than the originator of the design. The design verifier shall have remained independent of the overall design process."

Contrary to this section, the verification for the subject CWDs were not performed by an engineer independent of the design process.

- Section 5.6(2) stated that "Design verification should normally be complete, commensurate with the state of design activity, prior to release of associated design output documents to the plant."

Contrary to this section, the design verification process was never completed in that the VTM was never reviewed against the CWDs which delineated (erroneously) NI wiring.

- Section 6.0 stated that "Records of design input and verification activities shall be retained as QA records..."

Contrary to this requirement, the licensee could not produce records of design inputs to the CWD revision process, stating that the design inputs would have been the VTMs, which were not available in an approved form while the subject CWDs were being approved.

One of the action items to prevent recurrence was to check all open I&C and electrical PC/Ms to see if all the drawing approval signatures could qualify as independent verifiers. The licensee found three out of eight open modifications where a lack of independence existed. Two of these modifications were electrical and one was I&C.

10 CFR 50, Appendix B, Criterion III, Design Control, requires, in part, that measures be established to ensure that the design basis is correctly translated into drawings and that design control measures provide for verifying the adequacy of the design by individuals other than those who performed the original design. The inspectors concluded that the licensee's failure to implement the salient aspects of Instruction QI 1.7 adequately in this issue collectively represented a failure to satisfy Appendix B requirements and, as such, represented an example of an apparent violation (EEI 50-335/96-22-01, "Failure to Control Design Processes for Nuclear Instrumentation Modifications").

d. Installation of BEACON Computer Code

The licensee had installed a new in-core flux monitoring system (BEACON) during this refueling outage to replace the older in-core flux monitoring system (IMPAX). BEACON provided several significant improvements over IMPAX, the most significant being reduced time to analyze SAF test data. This improvement aided reactor engineering in identifying the NI problem and initiating prompt corrective actions.

During power operations, reactor engineering used BEACON to obtain the actual in-core flux profile. The actual in-core flux profile was then used to verify compliance with Technical Specifications (TS) and provide calibration information for the excore NIS drawers. As part of this routine surveillance, reactor engineering compares actual in-core flux profile to the in-core flux profile predicted by the core design code. Reactor engineering noted larger than normal errors between actual and predicted in-core flux profile. Because BEACON used the same neutronics engine as used in the core design code to generate in-core flux profiles, reactor engineering could not explain the error and notified the corporate core design engineers. As part of the process to resolve these errors, it was discovered that a simplifying assumption, used to overcome limitations of IMPAX, was not accounted for in the original design of BEACON. This simplifying assumption was used because the licensee had changed the fuel design to incorporate a longer end cap to prevent debris induced fuel failures. This longer end cap raised the overall core height by 2.64" causing an offset between detector midplane and actual core midplane. IMPAX assumed detector midplane was along core midplane and could not accommodate the 2.64" offset. Therefore, the licensee after discussion with the fuel vendor (Siemens), used this simplifying

assumption to lower the core midplane by 2.64" so that final design output would be referenced to detector midplane; not core midplane. However, the engineer preparing the design input for BEACON was not aware of this simplifying assumption; consequently, BEACON was referenced to core midplane resulting in an increased error between the core design predicted in-core flux profile and actual in-core flux profile.

The licensee's root cause evaluation concluded lack of cross-discipline review was the significant contributor to this design error. The inspector reviewed the licensee's root cause evaluation and concurred with the licensee's conclusion. Engineering Quality Instructions (EQI) 1.7, Design Input/Verification, dated July 5, 1995, states in part that "Design verification is the process whereby a competent individual, who has remained independent of the design process, reviews the design inputs, ... and design output to verify design adequacy. This independent review is provided to minimize the likelihood of design errors in items that are important to nuclear safety." Contrary to this requirement, the design inputs were not adequately reviewed by an independent individual in that the core midplane offset was not identified as a necessary design input for BEACON. This failure to perform an adequate independent design review for the BEACON system is identified as example two of an apparent violation (EEI 50-335/96-22-01, "Failure to Control the Design Process According to the Requirements of 10 CFR 50, Appendix B, Criterion III," EA 96-457).

e. Evaluation of Safety Consequences

The safety significance of reversing the detector inputs to the NIS drawers substantially reduced the safety margin between the Thermal Margin/Low Pressure (TM/LP) trip setpoint and the analysis limit even considering the increased TM/LP margin to the trip setpoint due to actual core operating conditions. The safety impact of the failure to identify the core and detector midplane offset on TM/LP or Linear Power Density (LPD) safety limits was minimal.

It was also identified that BEACON was placed into service on Unit 1 without any benchmarking against IMPAX, the on-line core performance monitoring code BEACON was replacing. Instead, BEACON was installed on Unit 2 and benchmarked against CECORE, which did not require any modifications to accommodate the core midplane offset. Technical Specification 6.8, Procedures and Programs, paragraph 6.8.1 requires in part that written procedures recommended in Appendix A of Regulatory Guide 1.33 revision 2, February 1978, shall be established and implemented. Engineering Quality Instruction (EQI) 3.7, Computer Software Control, Revision 1, Section 5.4, requires that SQA1 software shall be validated and verified (V&V'ed) in accordance with Section 5.6. Section 5.6 states that new software shall be V&V'ed prior to use. The V&V process includes the use of test cases to ensure the new software produces correct results. Item 4 of Section 5.6 states that technical adequacy shall be determined by comparing the test case to results from alternative methods such as functionally equivalent and previously validated software. In the case of BEACON, IMPAX would have been functionally equivalent software. Benchmarking BEACON against IMPAX might have identified the design error concerning core midplane offset because the two codes would not have yielded the

same results. Contrary to this requirement, BEACON was placed into service on Unit 1 without benchmarking against IMPAX. This is identified as an apparent violation (EEI 50-335/96-22-02, "Failure to Follow Procedure According to Technical Specification Sec. 6.8 for Placing the BEACON System in Service," EA 96-457).

E1.2 Prior Opportunities to Identify

a. Inspection Scope

The inspectors reviewed the subject event and activities preceding its identification to determine whether the licensee had opportunities to identify the miswiring of NI drawers sooner.

b. Observations and Findings

The inspector reviewed QA Audit Report QSL-PM-96-17, July/August 1996, which included, in PMON 96-052, a review of the licensee's performance with respect to design control for the subject PC/M. The QA review concluded that the licensee's engineering, maintenance and QA organizations were not sufficiently sensitive to the warning signs of a breakdown of the quality program. Indicators of problems cited in the QA report included:

- Vendor difficulties in meeting fabrication schedules
- Loss of the project's Lead Engineer four months prior to implementation
- Installation difficulties traceable to erroneous design information provided to the vendor from the licensee
- Loss of the Instrument & Control (I&C) Supervisor responsible for implementation midway through the installation process
- Numerous noise problems encountered in wide range NI channels after installation
- At least two cases in which the new design provided improper output to the RPS
- A large volume of change paperwork written against the installation package (32 CRNs), a large number of scope changes to the installation work order (20), and a large number of deviations against the pre-operational test procedure (46).

The inspector reviewed the CRNs generated against the subject PC/M and found the following:

- The CRNs addressed problems in the areas of structural/installation, vendor recommendations for performance enhancement, correction of vendor document errors, design errors, and field wiring difficulties.
- A large number of the CRNs addressed themselves to the installation of the wide range detectors and noise problems associated with system startup.
- A number of the CRNs clearly indicated inaccuracies in the new design, to include:
 - Incorrect statements concerning the sizes of cables already installed in the plant which were to be employed with the new design
 - Failures to change the ranges of control panel meters and strip chart recorders to accommodate the new range of the wide range detectors
 - A failure to treat the RCS Low Flow trip within the modification package, which resulted in a constant trip signal from the RPS after installation

The inspector also reviewed 13 Condition Reports (CRs) associated with the installation of this modification. As in the case of the CRNs, the CRs covered a broad area and addressed both wide range and linear range installation issues. The inspector identified two CRs of particular note:

- CR 96-1358, written on June 11 by QA, reported a possible loss of design control in the installation. The CR reported that multiple problems had been encountered during the installation of the modification, including the loss of key personnel, a work package which had become "voluminous and unwieldy" with "13 work package scope changes...approx 40 'deviations' to the Pre-Op procedure, and also numerous changes to the Vendor Tech manual specifications." The CR Condition Description concluded that "...with so many changes to the Tech Manual and Pre-Op procedure and also the lack of personnel that are experienced in this particular modification, the possibility exists that the Design Control process could fail." The resolution to this CR, prepared by I&C and Engineering, concluded that a loss of design control had not occurred, as a review of all associated paperwork indicated that appropriate reviews had been performed and approvals for actions taken had been obtained correctly.
- CR 96-1818, written on July 23 by I&C, questioned the operability status of NI detectors 6 (RPS channel B) and 9, given their installation during the outage and the need to have the reactor at power to calibrate them. The resolution to the CR stated that the detectors were operable, but stated that a check for ASI agreement would be performed at 13% power to compare RPS channel B with A, C, and D.

While indications of poor quality existed during the installation of the subject PC/M, the inspector concluded that the licensee could not reasonably be expected to perform a complete re-review of the design package as a result of those indications.

The inspector noted that the licensee's root cause evaluation identified that several opportunities existed for identification of the miswired conditions during power ascension testing. On July 25, with the reactor below 5%, operators noted channel B to be indicating more bottom-peaked than the other channels. This was explained by reactor engineering as expected behavior and the B channel was calibrated (forced to agree with incore data, which resulted in B channel indicating similarly to channels A, C, and D. Later the same day, with the reactor at 5.5% and Control Element Assemblies (CEAs) being withdrawn from 90 to 103 inches, ASI on channels A, C, and D were noted to trend toward the top of the core; however, channel B indicated ASI moving toward the bottom of the core. Operators questioned the indication and were told that B channel, being a new detector, would require calibration at a higher power level.

On July 28, while increasing power from 70% to 98%, operators again questioned a mismatch between channels B and A and channels C and D. RE responded that ASI was within TS limits and that a shape annealing factor (SAF) test was being performed on channel B, as the detector was new, to bring it into agreement with the balance of the channels. The disagreement was again identified on July 30 by operators. That same day, RE identified the miswiring while analyzing SAF data.

The inspector concluded that there existed an opportunity to identify the miswired channels during power ascension testing. Operators were successful in identifying anomalous behavior days before the ultimate identification of the condition. While the licensee's root cause evaluation concluded that "[prior] to significant power levels it is difficult to detect the discrepancies in RPS ASI trends..." operational experience in this case indicated that the trend could have been (and was, although not in an integrated fashion) identified at relatively low power levels.

The inspector further concluded that a failure to resolve the first indications of channel disagreement in a formal, technically defensible way (i.e. testing performed specifically with the goal of establishing a basis for the channel-to-channel differences) delayed the identification.

c. Conclusions on Conduct of Engineering

As a result of this inspection two violations were identified for the engineering area. One violation had two examples of problems with the licensee's design control process. One example involved the failure to verify independently Controlled Wiring Diagrams which were in error and resulted in wiring the NI drawers backwards. Another example resulted in the core midplane offset not being identified as a design input to BEACON, the computer program used for real time flux profile monitoring. The second violation involved the failure to validate and verify a new computer program before placing it in use.

M1 Conduct of Maintenance**M1.1 Replacement of No. 6 Nuclear Instrumentation Detector****a. Inspection Scope**

The inspectors reviewed the maintenance activity for replacing the No. 6 detector for channel B of the Linear Range Detector. The maintenance activity allowed reversal of the field cables.

b. Observations and Findings

All four of the RPS Linear Range Detectors had the connectors reversed as previously discussed but the B channel unlike the other three channels was giving the correct data. At the same time that the drawers were being replaced on Unit 1, the detector for channel B (detector no. 6) was being replaced as a maintenance activity. During connection of the field cables, the connections were reversed for the upper and lower detection chambers, thereby causing the B channel to record properly.

The root cause for the swap of the cables was that the new detector had different labeling than the existing cables. The existing cables were labeled TOP SIG and BOT SIG, and the new detector had A and B. The inspectors discussed this maintenance job with the I&C supervision who had responsibility for the latter part of this maintenance project. Several opportunities were presented to the maintenance personnel, one when the detectors were checked out in the warehouse and a second time when this condition was noted in the field.

Maintenance personnel should have resolved the labeling problem by writing a Condition Report (CR) and having a formal resolution. Technical Specification 6.8, Procedures and Programs, paragraph 6.8.1, requires in part that written procedures recommended in Appendix A of Regulatory Guide 1.33 revision 2, February 1978, shall be established and implemented. Administrative Procedure No. 0006130, Condition Reports, Revision 4, dated March 22, 1996, Par. 8.1.1.A states in part that "Any individual who becomes aware of a problem or discrepant condition ... should initiate a CR. If doubt exists, a CR form should be initiated". This failure to comply with the requirements of the administrative procedure is identified as an apparent violation (EEI 50-335/96-22-03, "Failure to Initiate a Condition Report for Labeling on Safety Related Detectors in Accordance With Technical Specification Sec. 6.8," EA-457).

c. Conclusions on the Conduct of Maintenance

The I&C maintenance personnel reversed the field cables for the no. 6 channel B detector. The cables were labeled differently than the existing ones and the maintenance personnel had two occasions to question this condition by initiating a Condition Report. An apparent violation for failure to conform to administrative procedure for writing a CR was identified.

V. MANAGEMENT MEETINGS AND OTHER AREAS

X.1 UFSAR Review

The inspectors reviewed the Unit 1 UFSAR for the areas covered in this report. The inspectors found that a past modification to the NI circuitry disabled the rod drop/turbine runback feature at St. Lucie Unit 1. The FSAR was never updated to reflect this change. PCWM 009-195, Revision 0, paragraph 7.1.8 F, acknowledged this deletion of function, but did not rectify the FSAR discrepancy in the section that updated the FSAR. This is another instance of weakness in the Engineering Review process, and will be included in Unresolved Item 50-335,389/96-04-09, "Failure to Update UFSAR".

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on October 18, 1996, and during a telephone conversation on November 25, 1996. The licensee acknowledged the findings presented. Dissenting comments were not received from the licensee.

The licensee did not identify any materials used during the inspection as proprietary information.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

D. Lowens, Acting Site Quality Manager
 D. Denver, Site Engineering Manager
 J. Scarola, St. Lucie Plant General Manager
 J. Stall, Site Vice President
 E. Weinkam, Licensing Manager

Other licensee employees contacted included operations, engineering, maintenance, and corporate personnel.

INSPECTION PROCEDURES USED

IP 37550: Engineering

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-335/93-22-01	EEI	Failure to Control the Design Process According to the Requirements of 10 CFR 50, Appendix B, Criterion III.
50-335/96-22-02	EEI	Failure to Follow Procedure for Placing the BEACON System in Service.

50-335/96-22-03

EEI

Failure to Initiate a Condition Report for Labeling
on Safety Related Detectors.Closed

50-335/96-11-06

URI

"Unit 1 NI Wiring Errors"

Discussed

50-335,389/96-04-09 URI

"Failure to Update UFSAR"

LIST OF ACRONYMS USED

ATTN	Attention
CFR	Code of Federal Regulations
CR	Condition Report
CRN	Change Request Notices
CWD	Controlled Wiring Diagram
EA	Enforcement Action
EEI	Escalated Enforcement Item
FPL	The Florida Power & Light Company
I&C	Instrumentation and Controls
IR	[NRC] Inspection Report
LPD	Linear Power Density
NI	Nuclear Instrumentation
NIS	Nuclear Instrumentation System
No.	Number
NRC	Nuclear Regulatory Commission
NUREG	Nuclear Regulatory (NRC Headquarters Publication)
PC/M	Plant Change/Modification
PDR	NRC Public Document Room
QA	Quality Assurance
QI	Quality Instruction
RE	Reactor Engineering
RO	Reactor Operators
RPS	Reactor Protection System
TM/LP	Thermal Margin/Low Pressure
TS	Technical Specification
UIC	Uncompensated Ion Chamber
USNRC	United States Nuclear Regulatory Commission
V&V	Validation and Verification

[12] EXPECTED
ATTENDEES

EXPECTED ATTENDEES

Florida Power and Light Co.

Art Stall, Vice President St. Lucie
J. Scarola, Plant General Manager
Tom Plunkett, President Nuclear Division
D. Fadden, Services Manager
Ed Weinkam, Licensing Manager

NRC

Stewart Ebnetter, Regional Administrator, Region II (RII)
Luis Reyes, Deputy Regional Administrator, RII
Albert Gibson, Director, Division of Reactor Safety (DRS), RII
Jon Johnson, Acting Director, Division of Reactor Projects (DRP), RII
Bruno Uryc, Director, Enforcement and Investigation Coordination Staff
(EICS), RII
Charles Casto, Chief, Engineering Branch (EB), DRS, RII
Carolyn Evans, Regional Counsel, RII
Ken Barr, Chief, Plant Support Branch (PSB), DRS, RII
Paul Fredrickson, Special Inspection Branch (SIB), DRS, RII
Mark Miller, Senior Resident Inspector, St. Lucie
Fred Hebdon, Project Director, PD II-3
Len Wiens, Project Manager, PD II-3

[13] CLOSING
REMARKS

CLOSING REMARKS
(S. Ebnetter)

In closing this predecisional enforcement conference, I remind the Licensee of two things:

First, the apparent violations discussed at this closed predecisional enforcement conference are subject to further review and may be subject to change prior to any resulting enforcement action.

Second, the statements of views or expressions of opinion made by NRC employees at this predecisional enforcement conference, or the lack thereof, are not intended to represent final agency determinations or beliefs.


ENFORCEMENT ACTION WORKSHEET

BREAKDOWN IN MANAGEMENT CONTROL OF THE ST. LUCIE EMERGENCY PREPAREDNESS PROGRAM

PREPARED BY: James L. Kreh

DATE: November 7, 1996

This Notice has been reviewed by the Branch Chief or Division Director and each violation includes the appropriate level of specificity as to how and when the requirement was violated.



Signature

Facility: St. Lucie Plant
Units: 1 & 2
Docket Nos.: 50-335, 50-389
License Nos.: DPR-67, NPF-16
Inspection Report No.: 96-18
Inspection Dates: October 7-18 and October 28-November 1, 1996
Lead Inspector: J. L. Kreh

1. Brief Summary of Inspection Findings:

Violation A

On the evening of October 3, 1996, the licensee conducted a test of its automated system known as the FPL Emergency Recall System (informally called "autodialer") for notifying the emergency response organization (ERO) in the event of an off-hour emergency requiring augmentation of the on-shift crew for staffing and activation of emergency response facilities (viz., Technical Support Center [TSC], Operational Support Center [OSC], and Emergency Operations Facility [EOF]). The autodialer did not operate, and no individuals received notifications during the test. A failure assessment by the licensee disclosed that the autodialer had been in an inoperable configuration for a period which apparently began on July 22, 1996. In addition, the inspection identified the licensee's failure to adequately maintain the manual backup system (a "call tree") for ERO call-out over an indeterminate period (at least the last several years). These concurrent deficiencies represent a failure (during the period July 22-October 3, 1996 at minimum) to maintain the capability to execute the provisions of the REP and its implementing procedures in a timely manner with respect to mobilization of the ERO during off-hours.

EEJ/81

ENFORCEMENT ACTION
WORKSHEET

- 2 -

Violation B

The licensee's training program for ERO personnel has not been adequately implemented since at least 1994. This violation includes failure to provide opportunities for most personnel to participate in exercises and/or drills, failure to provide annual retraining to certain designated personnel in 1994 and 1995, failure to provide any training for certain ERO positions with respect to selected implementing procedures, and failure to remove individuals from the ERO roster when their respirator qualifications had lapsed.

2. **Analysis of Root Cause:**

The root cause of both violations is failure of licensee management to (a) provide an appropriate level of oversight of the emergency preparedness program as required by the REP, and (b) ensure the implementation of timely and effective corrective actions for identified findings and deficiencies in emergency preparedness.

3. **Basis for Severity Level (Safety Significance):**

For both violations: Supplement VIII - Emergency Preparedness, SL III

Section C.3 of Supplement VIII presents as an example, "Violations involving ... a breakdown in the control of licensed activities involving a number of violations that are related ... that collectively represent a potentially significant lack of attention or carelessness toward licensed responsibilities."

Section IV.A of the Enforcement Policy states that "a group of Severity Level IV violations may be evaluated in the aggregate and assigned a single, increased severity level, thereby resulting in a Severity Level III problem, if the violations have the same underlying cause or programmatic deficiencies, or the violations contributed to or were unavoidable consequences of the underlying problem."

4. **Identify All Previous Escalated Actions Within 2 Years or 2 Inspections**

- ▶ 95-180: PORVs Inoperable Due To Personnel Error; SL III
- ▶ 96-040: Dilution Event; SL III
- ▶ 96-249: Multiple Examples of Inadequate 50.59 Reviews; SL III

5. **Identification Credit? Yes**

Violation A

Date licensee was aware of issues requiring corrective action: October 3, 1996. This identification credit/date applies only to the autodialer inoperability portion of the violation. The problem with the manual call-out system was NRC/CI-identified.

ENFORCEMENT ACTION
WORKSHEET

- 3 -

Explain application of identified credit, who and how identified and consideration of missed opportunities:

The inoperability of the autodialer was identified by the licensee on 10/3/96, but could have been identified much earlier if periodic functional tests (e.g., weekly) had been performed. With appropriate administrative controls in place (as had been recommended by an EP Coordinator as early as April 1996), autodialer inoperability would have almost certainly have been precluded. An autodialer problem (limited in scope--not a complete system failure) also occurred during the NRC-evaluated June 1993 exercise, but corrective action for that problem was clearly not sufficiently comprehensive.

Violation B

Date when the licensee was aware of issues requiring corrective action: January 1996.

Explain application of identification credit, who and how identified and consideration of missed opportunities:

Many of the identified failures in the licensees training program were self-identified in a self-assessment that was performed in January 1996. However, some of the identified failures were not self-identified, but should have been through existing licensee program controls.

6. Corrective Action Credit? No

Violation A

Administrative controls have been implemented for the autodialer under Protective Services Department Guideline No. PSG-015, "Maintenance and Testing of the Emergency Recall System", Revision 0, dated 10/29/96. For the manual call-out system, individuals required to maintain a copy of the procedure were added to the controlled distribution list, and a drill was conducted on October 10, 1996 with reasonably successful results.

Application of corrective action credit: (1) No credit for autodialer issue because identified by licensee EP Coordinator in early 1996 and no action taken; (2) Credit for correction of manual call-out problem after identification to licensee on 10/7/96.

Violation B

The licensee has initiated action items to evaluate and determine corrective actions for self-identified issues. The licensee is currently completing a mass training effort for all emergency response organization positions necessitated by recent changes in responsibilities from Corporate staff assignments to Plant staff assignments.

Application of corrective action credit: No credit because the licensee has not yet fully determined or implemented programmatic changes to resolve identified issues.

ENFORCEMENT ACTION
WORKSHEET

- 4 -

7. Candidate For Discretion? No

Licensee's performance in emergency preparedness is now recognized to have been particularly poor during the past several years.

8. Is A Predecisional Enforcement Conference Necessary? Yes

Why? To determine whether the subject violations represent a programmatic breakdown in emergency preparedness.

If yes, should OE or OGC attend? Yes

Should conference be closed? No

9. Non-Routine Issues/Additional Information:

OTHER FINDINGS FROM THE OCTOBER 1996 EP PROGRAM INSPECTION

Violation

Failure to establish an Emergency Plan Implementing Procedure (EPIP), or to have an adequate EPIP, with appropriate implementing details to address certain aspects of the Radiological Emergency Plan as follows:

- a. the transfer of OSC functions to an alternate location in the event that evacuation of the primary OSC is required (EPIP-3100032E, "On-site Support Centers", contains no implementing details for the statement in Radiological Emergency Plan Section 2.4.4 that "In the event that the OSC becomes untenable, the Emergency Coordinator will designate an alternate location.") {inadequate procedure}, and
- b. recovery activities upon reaching a stable plant condition following an emergency (Radiological Emergency Plan Section 5.4) {no procedure}.

Emergency Preparedness Program Weaknesses

1. Inadequate program of drills to ensure availability of sufficient ERO personnel and timeliness of ERF staffing
2. Management failure to ensure the implementation of timely corrective actions for certain emergency preparedness deficiencies and weaknesses. Examples are:
 - a. failure to address concerns regarding the audibility of the Gaitronics (or plant public-address system) formally identified in late 1994 and still being tracked as an open item by the licensee's corrective action system,
 - b. failure to provide adequate corrective action to address a questionable capability for notification of the State of Florida within 15 minutes of an emergency declaration (identified by an NRC inspection in February 1995), and

ENFORCEMENT ACTION
WORKSHEET

- 5 -

- c. failure to implement timely corrective actions for deficiencies and recommendations identified by the critique of the Hurricane Erin response in August 1995 (examples of issues: identify hurricane-safe structures onsite and a plan for positioning personnel in those structures; designate an onsite individual to monitor the hurricane path; establish consistent staffing policies)

- 10. This Action is Consistent With the Following Action (or Enforcement Guidance) Previously Issued:

Supplement VIII, Section C.3

ENFORCEMENT ACTION
WORKSHEET

- 6 -

11. Regulatory Message:

Management must provide strong and consistent oversight and support for emergency preparedness activities in order to ensure a viable emergency response capability at all times.

12. Recommended Enforcement Action:

Two SL IV violations evaluated in the aggregate as a SL III problem

13. Should This Action Be Sent to OE For Full Review? No

14. Exempt from Timeliness: No
Basis for Exemption: N/A

Enforcement Coordinator:
DATE:

DRAFT NOTICE OF VIOLATION

St. Lucie Plant
Inspection Report Nos. 50-335, 50-389/96-18

- A. 10 CFR 50.54(q) requires that nuclear power plant licensees follow and maintain in effect emergency plans which meet the planning standards of 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50.

Section 2.4 of the licensee's Radiological Emergency Plan (REP), Revision 31, states that activation of the Technical Support Center (TSC) and the Operational Support Center (OSC) will be initiated by the Emergency Coordinator in the event of an Alert, Site Area Emergency, or General Emergency, and that arrangements have been made to staff the TSC and OSC in a timely manner. Also specified is that activation of the Emergency Operations Facility (EOF) is required for a Site Area Emergency or General Emergency, and that arrangements have been made to activate the EOF in a timely manner.

The REP requirements delineated above are implemented by procedure EPIP-3100023E, "On-Site Emergency Organization and Call Directory", Revision 72. The instruction in Section 8.2 of that procedure states that, upon the declaration of an emergency classification, "the Duty Call Supervisor will initiate staff augmentation" using the "Emergency Recall System or Appendix A, Duty Call Supervisor Call Directory to notify persons..."

Contrary to the above, from approximately July 22 to October 3, 1996, arrangements were not available to staff or activate the TSC, OSC, or EOF in a timely manner because the licensee did not have the capability to implement either the primary method (using the Emergency Recall System) or the backup method (using the Duty Call Supervisor Call Directory) for notifying its personnel to report to the plant during off-hours to staff and activate the TSC, OSC, and EOF.

- B. 10 CFR 50.54(g) requires that nuclear power plant licensees follow and maintain in effect emergency plans which meet the planning standards of 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50.

REP Section 7.2.2, "Training of On-Site Emergency Response Organization Personnel", states, "The training program for members of the on-site emergency response organization will include practical drills as appropriate and participation in exercises, in which each individual demonstrates an ability to perform assigned emergency functions." The licensee's Plan further states, "For employees with specific assignments or authorities as members of emergency teams, initial training and annual retraining programs will be provided. Training must be current to be maintained on the site Emergency Team Roster."

Contrary to the above, the licensee failed to provide a program which included an opportunity for each individual assigned to the on-site emergency response organization to participate in a drill or exercise, as follows:

ENFORCEMENT ACTION
WORKSHEET

- 8 -

1. In 1994, the licensee failed to provide training for 17 positions (approximately 92 individuals) identified as part of the on-site response organization. In 1995, the licensee failed to provide training for 8 positions (approximately 54 individuals, identified as part of the on-site response organization.
2. The licensee's training program failed to include initial, periodic retraining, or information on revisions with respect to certain procedures required to be implemented by several identified positions. These procedures included EPIP 3100026E, Criteria for Conduct of Evacuation; EPIP 3100027E, Re-entry; and EPIP 3100035E, Offsite Radiological Monitoring.
3. For the calendar year 1995, the licensee failed to remove from the emergency response organization 4 individuals who had not completed retraining as required, and their training qualifications had expire in 1994. The licensee failed to remove 6 individuals from the emergency response organization effective October 6, 1996, who had not remained qualified to fill response team requirements as a result of allowing their respirator qualifications to lapse.